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ANGLER



Straight Talk

Thinking Anew and Acting Anew

A new year is upon us, and as we look forward to 1996, we are reminded of what a wise Greek philosopher once said: "Only change is unchanging." The last couple of years have witnessed many changes in the Fish and Boat Commission. I'm starting my second full year as your Executive Director. New fishing license fees are now in effect, with resident fees changing for the first time since 1983. Use of gill nets by commercial fishing boats on Lake Erie stopped on January 1, 1996. We've changed the format of the *Summary of Fishing Regulations and Laws*, and we're training a class of bright, new waterways conservation officers. We're looking at changes in our organizational structure. We want to improve key processes to better serve the anglers and boaters of Pennsylvania.

When the General Assembly was considering legislation to change fishing license fees, State Senator J. Doyle Corman asked us to cooperate in a "high-level study" of the Commission, its organization and its management processes. My response was that the Fish and Boat Commission prides itself on being open to new ideas and that we would welcome such a high-level review. As a result, the Pennsylvania Senate funded a study by Wolf Advisory International, Ltd.

Starting in June, Wolf Advisory conducted a fact-finding study to identify the purpose, function and current activities of the Fish and Boat Commission. The study tried to identify specific areas of improvement opportunity and develop recommendations based on the findings. Wolf conducted in-depth interviews with 27 Commission employees and had contacts with numerous other Commission personnel.

The Wolf Advisory "Overview Study of the Pennsylvania Fish and Boat Com-

mission" included 16 recommendations for consideration by the members and staff of the Commission. Because of the limited time and budget available for this study, Wolf Advisory was unable to delve into great detail in its "high-level" study, and some of the observations in the study reflect this. However, the Wolf Advisory study is a valuable tool to be used by the Commission as we move forward into the next century.

One of the major themes of the Wolf Advisory study was that the Fish and Boat Commission needs to give careful consideration to setting priorities within its resources and not trying to do everything. Even before the Wolf Report was issued, the Commission recognized the need for careful focusing of its resources on its core functions. The report recommended that the Commission offer "a specific mix of products and services that are *doable* within the capabilities and capacities of available resources."

The Fish and Boat Commission is grateful to the Senate for funding this report. We believe the Wolf study offers valuable insights into how we can do even better in "providing fishing and boating opportunities through the protection and management of aquatic resources." We intend to couple this report with our on-going planning and organizational efforts, as well as initiatives to better assess angler and boater desires. We plan to use this information as a kind of roadmap for improvement.

One of the most important observations in the Wolf Report was that "the major strength of the Fish and Boat Commission lies within its people." The Wolf study "revealed a group of personnel committed to the agency mission, dedicated to their jobs and caring strongly about the long-term health of the organization."



Peter A. Colangelo

*Executive Director
Pennsylvania Fish & Boat Commission*

Every day dedicated Fish and Boat Commission employees work hard for the anglers and boaters and the resources they enjoy. Nowhere was this dedication more evident than our employee response to the "November Nor'easter" that caused power outages, loss of phone service and other problems, particularly in the central part of the Commonwealth. Fish and Boat Commission employees responded to serious problems at several fish culture stations. Several employees worked nearly 24 hours straight trying to protect the fish being raised, open access to the facilities and get things back on line. The extra efforts of our employees in responding to this weather emergency remind us of how often Commission employees from all bureaus and functions have gone that extra mile to protect the resource and serve the angling and boating public.

The Wolf Advisory Report was right: The Commission's greatest strength is its people. As we face the challenge thinking anew and acting anew, I know our fine employees will respond as they have in the past, with professionalism and pride in a job well done.

Peter A. Colangelo

Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

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Catching Winter Walleyes by Mike Bleech.....4

Annual Report, Fiscal Year 1994-95
(July 1994 through June 1995).....7

Southeast Pennsylvania Timetable by Vic Attardo.....9

A Crayfish for the Long Rod by Chauncy K. Lively.....13

On the Water with Charles F. Waterman.....15

Streams for Catching January Trout by Charles R. Meck.....16

Kinzua Creek Watershed by Robert L. Petri.....19

Yellow Creek Watershed by Mark A. Nale.....23

Ice Fishing at Laurel Lake by Seth Cassell.....27

SMART Angler's Notebook.....31

This issue's cover, photographed by Joe Workosky, shows Jennifer Workosky with a nice stocked brook trout on Bens Creek, Somerset County.

Success at Alan Holman Lake (Little Buffalo State Park)

Commission Area 7 Fisheries Manager Larry Jackson reports good news for central Pennsylvania largemouth bass anglers at the 88-acre Alan Holman Lake, in Little Buffalo State Park, Perry County.

"In the late 1980s and early 1990s, Holman Lake had shown through electrofishing an abundance of largemouth bass, but only a few bass were larger than the 12-inch length limit," Jackson says. Jackson points out that harvest by anglers, water quality, habitat and sufficient abundance of appropriate-sized prey are influences on the quality of reproducing fisheries like largemouths.

Big Bass regulations, with a 15-inch length limit and daily creel limit of four, were put into effect on Holman Lake in January 1992 to adjust the size structure of the population by regulating harvest.

"In May 1995," Jackson says, "our total catch per electrofishing hour didn't change much from the results we obtained in the early 1990s. But our 1995 catch of largemouth bass 12 inches and larger doubled. We shifted the size structure to larger fish by protecting the bass from harvest until they reached 15 inches. The abundance of bass from 12 to 15 inches observed in 1995 will translate into more bass in Holman Lake above 15 inches in future years."—Art Michaels.



Catching Winter Walleyes

by Mike Bleech



What is it that compels anglers to spend blustery winter days on cold rivers in search of walleyes?

"It's rarely crowded out there in the winter. You may see one or two boats, but that's about it," Dave Schrader says.

Dave, who hails from Endeavor, a small village in rural Forest County, also believes walleye fishing is best during fall and winter. Actually, Dave lives outside of Endeavor, close enough to the Allegheny River to fish it since he was a young boy more than 30 years ago. Other things occupied a lot of his time, like racing V-8 modifieds for 18 years. This competitive side emerged again in Dave's walleye fishing. After several years of devotion to walleye fishing, he began competing in the In-Fisherman Professional Walleye Trail last year, qualifying for the championship tournament, which involves just the top 40 of 137 touring pros.

Why walleyes instead of the bass tournaments, or Great Lakes trout and salmon tournaments? After all, the walleye trail is in the upper Midwest. The nearest tournament is hours of driving from his northwest Pennsylvania home. On any summer weekend there are numerous bass tournaments nearby.

"The walleyes just have something special," Dave says. "I think it takes more finesse. Every time you go for these fish it's a challenge to get them. I think walleyes present more of a challenge than bass or salmon."

I think you'll get some arguments on that, Dave, but not from a rapidly growing group of walleye enthusiasts all across the state. Walleyes are now abundant in several of our major rivers, including the Allegheny, Susquehanna, Juniata and Delaware. Dave's tips on winter walleye fishing can help anglers on all of these rivers.

Competition and his yearning to try new waters taught Dave versatility, but the Allegheny River is still his home water. During the years before he got into the national walleye mainstream, his specialty was winter walleyes on the river, and this is still what he does during his spare time.

"I do quite a bit from Tidioute to Oil City, probably mostly around Tionesta, but there's some pretty good walleye fishing around Oil City."

The best areas change from time to time, he says. The hot stretch may be from Warren to the Buckaloons for a few years, then Tionesta gets hot, or Oil City to Franklin. Anglers have to be flexible to stay with the best fishing. You might learn a lot by asking at bait shops along the river, but by the time word gets around, the best fishing may be past. Dave keeps in touch by trying different places instead of pounding his best pools every time. This way when the hot pools go cold, he has somewhere else to go.

Mobility is an important factor. Shoreline access to the middle Allegheny is very good, especially from Kinzua Dam to Tionesta, which is bordered by the Allegheny National Forest. However, a lot of the best winter walleye water can not be reached from shore, and shore fishing commits you to one small area.

The river level is often high enough during winter, especially during early winter, to reach most pools from one of several boat access areas. Dave is shopping for a jet boat, though, to provide complete mobility during any flow. Some very good pools never were fished to any extent during winter until jet boats became common on the Allegheny during the early 1990s.

Unlike many serious river walleye anglers, Dave does most of his fishing during the day. This is mostly because of his tournament fishing experience. Having been forced to fish during daylight at tournaments made him a better daytime angler and taught him that night fishing is not as necessary as he once figured.

"In winter, I think the day fishing is just as good as the night fishing. Being able to pick your days is more important. If we have bluebird days, mile-high skies, I don't go. I really like to head for the water when I feel a front move in."

Dave relies heavily on a barometer. When it falls, it is a signal that a snowstorm or freezing rain is on the way. Good fishing often occurs just before the front arrives, or as it arrives. Otherwise, he prefers overcast days. Warmer, overcast days are excellent, not just for the comfort of anglers. Relatively warm spells in northwest Pennsylvania during winter may mean temperatures in the 30s and may lead to long periods of good fishing.

Very cold weather locks up most of the good river pools in ice. The river is more inclined to freeze farther south from Kinzua Dam. The Starbrick dredge pool, uppermost of Dave's favorite pools, freezes last. But if you can stand the cold, and if you can keep your rod guides from icing up, fishing can still be good.

Current and structure

Bottom structure may be the primary element in locating walleyes in lakes, but in rivers you must look at the combination of structure and current. In most cases current creates structure by shaping the gravel bottom. And at the same time, structure shapes the current.

During summer you might find walleyes just about anywhere in the middle Allegheny, with the exception of the swiftest, shallowest riffles. But during winter they are much less inclined to fight the current. Look for walleyes in the pools.

There are two distinctly different kinds of pools in the middle Allegheny—natural pools and dredged pools.

Natural pools vary considerably. From Kinzua Dam to Tidioute there is not a lot of water deeper than 10 feet in natural pools. From Tidioute to Oil City several places drop below 15 feet. Pools also tend to be longer moving down river. In most places

the bottom slopes gently toward a main channel. The only common irregular structures are gravel bars at the heads of the pools, or where tributaries enter the river, or boulders.

Some people think that dredging is what brought great numbers of walleyes into the middle Allegheny because these pools provide such good walleye fishing. Indeed, walleye fishing has improved dramatically during the past three decades. Probably Fish and Boat Commission stocking had more to do with it, yet the significance of the dredge pools should be recognized.

Dredge pools are basically bathtub-shaped, yet they generally have more irregular structure than natural pools. These pools were created by sand and gravel dredging operations. The barges that dredged the pools would be anchored in one place for some time because as the gravel was dredged upriver from the barge, the river would wash more gravel from upriver to replace the gravel that was removed. Large rocks and boulders would be pushed off the back of the barge, in time creating large piles. These are the ridges that you may notice on sonar.

Time erases the evidence of dredging. Eventually gravel washes into the deeper areas. Few people even remember the dredge that existed 30 years ago just below the bridge at the upriver end of the city of Warren. Dredge pools are much deeper than natural pools, in some places more than 35 feet deep.

Many anglers believe the best places to find big walleyes are in the deepest places. Dave disagrees.

"Learn to fish that shallow water with light jigs," he says. "I spend most of my time fishing 3 to 10 feet of water, especially when the water rises a couple of feet."

Rising water usually has more color than lower water levels. This increases the likelihood that walleyes will move into shallow water. Otherwise, walleyes will probably be toward the deeper end of that 3-foot to 10-foot range.

"I've spent my time out in that deep water. I tend to catch better walleyes in that shallow water than I do in the 20-foot stuff."

"I'll come back to the boat launch at Tionesta with some nice walleyes and talk with other fellows," Dave says, "and they said all they got was dinks while drifting in the deep channel."

The same can be said of the deeper natural pools.

"Also look for back eddie—reverse currents," Dave says (see Figure 1, page 6).

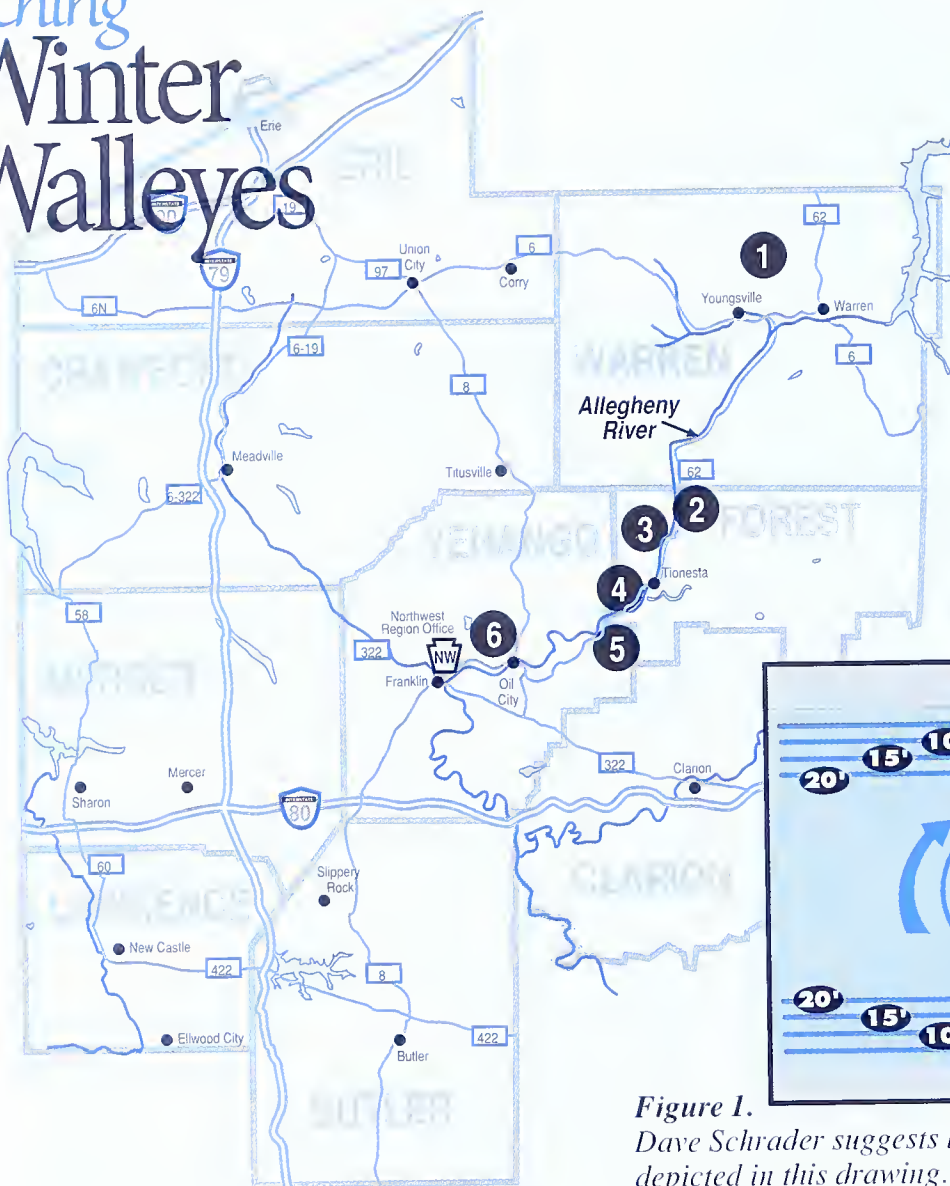
Back eddies form on the sides of the main channel. The hotspots are usually where a back current crosses structure such as humps and sunken points.

"There are a lot of days when I anchor and a lot of days drifting is the way to go," Dave says. "If the walleyes are on shallower structure I anchor off to the side and drift jigs over the structure. But if the walleyes are scattered, I drift and fish vertically, if the water is deep enough."



Catching Winter Walleyes

Dave Schrader's Winter Walleye Hotspots



1. Starbrick Dredge. This long, dredged pool is separated from the Pennsylvania Fish and Boat Commission Starbrick Boat Access by one shallow stretch. Depending on the water level, if the Kinzua Dam outflow is at least 2,000 cfs, this shallow stretch can be crossed with a propeller-driven boat, but with caution. Only extremely cold spells lock this pool in ice.

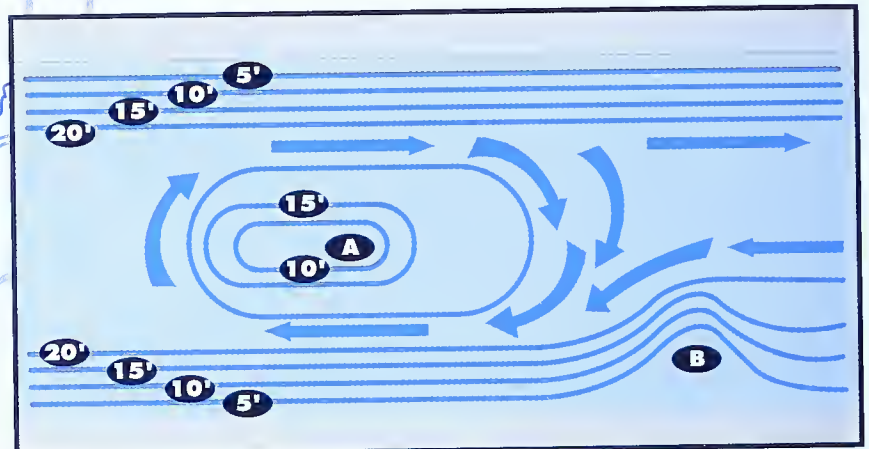


Figure 1. Dave Schrader suggests looking for walleyes in back eddies, like the one depicted in this drawing. Structure such as the hump "A" and the sunken point "B" are likely hotspots.

Lures, bait, presentation

Even though Dave is in tune with sophisticated walleye fishing methods, he prefers to keep his winter fishing on the river as simple as possible. A jig and minnow handles most of it. He prefers lighter jigs than those most anglers use.

"Mostly I use 1/16-ounce or 1/8-ounce," he says. "If there is a lot of wind I go to 1/4-ounce. Lighter jigs are more natural. They swim instead of bounce on the bottom."

Another lesson tournament fishing has taught Dave is that the difference between winning and losing is often who catches the greater percentage of the walleyes that strike the bait or lure. For light-striking winter walleyes, he uses stinger hooks on his jigs. Stinger hooks are usually small treble hooks attached either to the hook eye or the bend of the shank by a short leader. This puts a hook at both ends of the minnow. It is difficult for a walleye to take this lure without getting hooked.

Dave uses small minnows, about 2 1/2 inches long.

"I think that's what those walleyes are doing up there in shallow water, chasing small minnows," he says.

Emerald shiners and fathead minnows are the minnows most commonly found in area bait shops. However, Dave prefers spottail shiners. These are heartier than emerald shiners, though most anglers cannot tell the difference between them. Both are native to the Allegheny drainage. He catches his own in a minnow trap from a tributary creek.

Dave describes his presentation of the jig and minnow as "a nice steady, slow retrieve, nothing erratic—just keep it steady."

Like the rest of his system of fishing for river walleyes during winter, Dave relies on sound basics. The secret to catching walleyes consistently is not some secret lure or retrieve—it is finding the walleyes.

2. Trunkerville. It is hard to get to with a boat, Dave says, but there is good bank fishing access along Route 62. Local anglers catch a lot of walleyes using stonerollers and spottail shiners as bait.

3. Little Hickory Creek Mouth. Launch from the Fish and Boat Commission access near West Hickory. Dave suggests anchoring just off the current break. Cast jigs and minnows across the current break and let them drift with the current. Shore fishing is possible in this relatively small area on the Route 62 side bank.

4. Tionesta Dredge. Drift the same side as the boat launch. Cast jigs into 3 to 4 feet of water and retrieve them out to 10 to 12 feet. This is one of the more popular areas. Shore fishing can be very good. Ask in the village of Tionesta for directions to the boat launch near the mouth of Tionesta Creek.

5. President. Good shore fishing or boat fishing here. There is a sharp bend, and a deep hole just below that. Anchor just off the side of the current at the tail of the pool. Swing light jigs in the current.

6. Oil City. There are some spots on the Route 8 side that come up to 8 to 10 feet out of the 25-foot channel. Anchor off them, or drift. The water around the boat ramp at Oil City tends to freeze sooner than most of the middle Allegheny. —MB.

ANGLER

ANNUAL REPORT

Fiscal Year 1994-95

(July 1994 through June 1995)

Executive Office

Peter A. Colangelo took office as the Fish and Boat Commission's eighth executive director on October 3, 1994. Lawrence W. Hoffman, who served as executive director during the interim period from March until September 1994, returned to his duties as executive assistant. Mr. Hoffman retired in August 1995, and Dennis Guise was appointed as deputy executive director and chief counsel.

Governor Ridge appointed Donald K. Anderson of Meyersdale and Enoch S. "Inky" Moore, Jr., of Newville as new Commissioners. Both were confirmed by the Pennsylvania Senate and were sworn into office in May 1995.

The Commission held four regular meetings and numerous committee meetings during the last year. At its July 1995 meeting, the Commission elected Howard E. "Gary" Pflugfelder of New Cumberland as its president and Donald N. Lacy of Reading as vice president.

The Commission continued its efforts to develop a strategic plan. After preparation of a summary of the draft plan, nine public planning workshops were then conducted in the summer and fall of 1994. A public meeting in Erie wrapped up the Commission's public participation process in January 1995. We received input from 288 people who provided their ideas and preferences.

In June 1995, the General Assembly approved the first change in basic resident fishing license fees since 1983. Under the new fee schedule, which takes effect for 1996, the resident license costs \$16.25.

Bureau of Education and Information

Articles that appeared in the Fish and Boat Commission's magazines, *Pennsylvania Angler* and *Boat Pennsylvania*, won first place awards in the 1995 Outdoor Writers Association of America Awards Competition. During the year, expansion of the over-the-counter distribution of *PA Angler* continued.

The Fish and Boat Commission's Education and Information Volunteer Corps conducted some 2,000 hours of programs, reaching nearly 175,000 people. Commission-certified Fishing Skills Instructors conducted 105 "I'm a SMART Angler"

basic fishing skills and aquatic education classes. Nearly 3,300 children and other new anglers took part in these classes. In Pittsburgh, we introduced some 1,000 children to fishing through the Commission's Urban Fishing Program. We reached the same number of children in Philadelphia through a partnership with the Philadelphia Police Athletic League and the Philadelphia Department of Recreation's Camp William Penn.

The Pennsylvania League of Angling Youth (PLAY) newsletter was distributed to 34,000 school children. PLAY club members numbered 2,500.

More than 600 professional educators attended the forty 15-hour KARE teachers workshops offered in 1994-95. These educators and those trained in the last six years used the Commission's curriculum and materials to teach an estimated 500,000 school students about Pennsylvania's aquatic resources in the last year.

Bureau of Boating

A record 330,000 boats were registered in 1995. This figure includes 15,000 personal watercraft, 18,000 new boat registrations, and 37,000 unpowered boats.

The Commission issued Boating Safety Certificates to 9,043 individuals who successfully completed an approved boating course. A total of 6,815 of these people took Commission courses. There were 346 active instructors who taught the Commission's Basic Boating Course, and 345 additional instructors taught Boating and Water Safety Awareness. Instructors in the water and ice rescue programs have trained more than 13,000 emergency response personnel since the program's inception.

We printed the Commission's new *Boating Handbook* and distributed it to 125,000 boat owners in the Commonwealth. The boating film library loaned copies of boating safety films and videos to 243 agencies or instructors.

Boaters reported 108 accidents in which 94 people were injured. Eight fatal recreational boating accidents resulted in 10 fatalities. This is five fewer than in 1994.

The Commission issued 394 permits for buoys, mooring areas and waterski ramps. Federal, state and private individu-

als installed 1,800 aids to navigation and floating structures.

We issued 1,355 capacity plates to replace ones lost or no longer readable, and for new homebuilt boats.

Bureau of Law Enforcement

Bureau of Law Enforcement personnel continued to perform a wide variety of duties throughout the Commonwealth. Their work included fish and boat law patrols with emphasis on the preservation of water quality (pollution/disturbance actions), reckless and negligent operation of boats, and boating under the influence of alcohol or drugs. WCOs also worked with hatchery personnel to ensure the proper stocking of both coldwater and warmwater fish. They participated in more than 2,000 education/information functions such as attending sportsmen's meetings, sports shows and school programs.

In order to fill vacancies and prepare for the future, the Commission has worked with the Civil Service Commission to select a new class of waterways conservation officer trainees. Eighteen new waterways conservation officers started training in August 1995, with a projected graduation in the spring of 1996.

Bureau of Fisheries

The Bureau of Fisheries consists of the divisions of Fisheries Management, Research, Trout Production, Warm/Coolwater Production, and the Fisheries Data Center. Bureau staff was involved in the production and distribution of a variety of species of fish. These fish were produced at the Commission's 14 fish culture stations and stocked following recommendations and plans formulated by Fisheries Management. Accomplishments of the Bureau in 1994-95 included:

- Stocking 4,846 miles of streams and 10,268 acres of lakes and ponds with more than 5.1 million adult trout.
- Stocking 1,092 miles of rivers and streams and nearly 93,000 acres of lakes and ponds with a total of nearly 106 million fry, fingerling and adult warm/coolwater fish.
- Involvement of 158 sponsors and 191 nursery sites in the Commission's Cooperative Nursery Program.

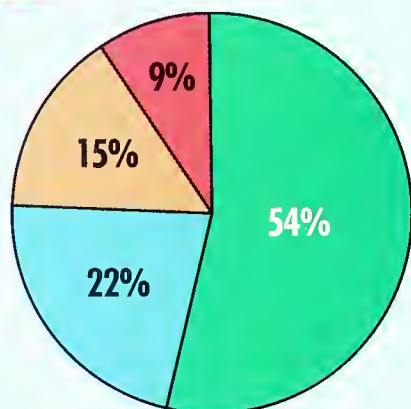
ANNUAL REPORT



- Passage of 872 adult American shad over the Easton Dam on the Lehigh River.
- Completion of a comprehensive angler use/harvest survey in Lake Erie.
- Completion of report reflecting positive response of stream sections managed in the wild trout program with no stocking.
- Provided an opportunity for additional trout angling on many trout-stocked lakes and reservoirs during March through the extended trout fishing season.
- Consolidated special regulation programs, initiated a selective harvest program, heritage trout angling program and a new approach to the use of conservative regulations on Penns Creek.
- First year of triploid grass carp program as alternative technique to manage nuisance aquatic vegetation.

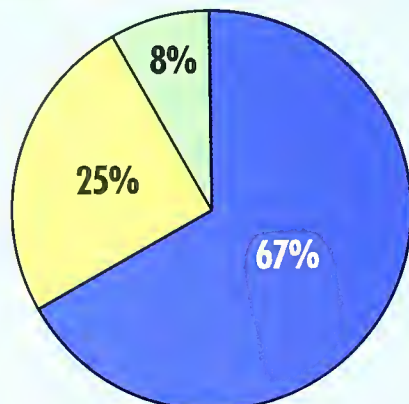
FISH FUND TOTAL REVENUE \$25,478,000

Fishing licenses	\$13,694,000
Federal aid/augmentations	\$5,731,000
Trout/salmon permits	\$3,720,000
Miscellaneous revenue	\$2,333,000



FISH FUND TOTAL EXPENDITURES AND COMMITMENTS \$27,690,000

Salary, wages, benefits	\$18,442,000
Operational expenses, grants and subsidies	\$6,796,000
Fixed assets	\$2,452,000



Bureau of Property & Facilities Management

- Completed construction of Phase I of Tylersville Fish Culture Station renovation.
- Continued construction of Bellefonte Fish Culture Station wastewater treatment facility and renovations.
- Continued construction of Phase II electrical work of Pleasant Gap Fish Culture Station renovation.
- Continued installation of Benner Spring Fish Culture Station alarm system.
- Constructed concrete bases and electrical entrances for various hatchery fuel supply installations.
- Completed construction of Loyalsock Access, Lycoming County.
- Completed construction of launch ramp for Deer Creek Access, Allegheny County.
- Completed reconstruction of Fords Lake dam, access and handicapped fishing pier, Lackawanna County.
- Completed construction of Pine Access, Clinton County.
- Dredged Walnut Creek and Northeast Marina basins.
- Completed bird predation work at Bellefonte Fish Culture Station, Corry Fish Culture Station and Tionesta Fish Culture Station.
- Completed lower half of Huntsdale Fish Culture Station bird predation project.
- Began bird predation structure for Pleasant Mount Fish Culture Station.
- Replaced the launch ramp at Linden Access, Philadelphia County.
- Installed an additional launch ramp at Goldsboro Access, York County.
- Constructed an additional parking lot at the Muddy Creek Access, Lancaster County.
- Landscaped Stackhouse Training School grounds.
- Completed necessary renovations to 28 Commission structures for compliance with the Americans with Disabilities Act.

Bureau of Administrative Services Fishing License Section

The Section appoints and supervises some 1,700 issuing agents consisting of county treasurers and private businesses. Monthly we received and audited reports with accompanying revenue deposited into the Fish Fund.

The License Section issues licenses by mail and over the counter. We have also appointed select agents at key locations in Ohio and New Jersey to service many nonresident anglers.

Fishing licenses issued this fiscal year include:

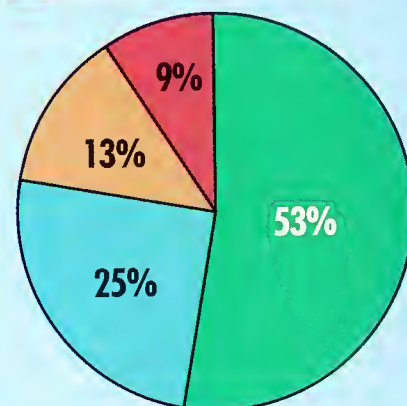
Resident	962,746
Nonresident	66,437
Senior resident	20,406
Tourist	14,521
Senior lifetime	14,433
Free	1,240
Trout stamps	744,059
TOTAL	1,823,842

Federal aid projects

Fish Fund	\$5,772,733.72
Boat Fund	\$1,076,898.36
TOTAL	\$6,849,632.08

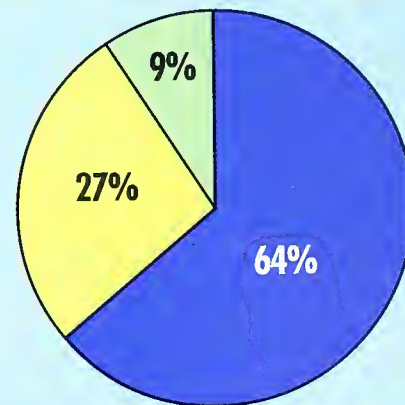
BOAT FUND TOTAL REVENUE \$8,485,000

Boat registrations	\$4,554,000
Liquid fuels tax	\$2,096,000
Federal aid/augmentations	\$1,090,000
Miscellaneous revenue	\$745,000



BOAT FUND TOTAL EXPENDITURES AND COMMITMENTS \$7,576,000

Salary, wages, benefits	\$4,818,000
Operational expenses, grants and subsidies	\$2,057,000
Fixed assets	\$701,000



SOUTHEAST PENNSYLVANIA TIMETABLE

by Vic Attardo



It seems as if I never have enough time to fish. No matter how many watery excursions I manage to take, I'm always looking forward to the next trip.

Am I addicted to fishing? You bet I am, and proud of it.

But like everyone else in the modern world, there's a limit to the number of hours I can spend on the water. So having more desire than opportunity, I like to maximize my fish-catching effort by being in the right place at the right time.

Of course, no one can predict with perfect accuracy the machinations of a favorite gamefish. But by using a detailed log book that I began many years ago, I not only have information on how and where I catch fish, but also a record that tells me when to fish.

My five-volume library contains not only a chronicle of the well-known seasons, such as the start of shad fishing in early April, but it also holds the key to catching fish in the off-seasons, when many anglers have hung up their rods to go to flea markets and football games.

Of course, my log books are filled with notes on such far-away places as northern Canada and the great Midwest, but my most valued information comes from the homelands of southeastern Pennsylvania, where getting away for a day on the water does not mean a plane ride or a 12-hour drive.

By far, the most important lesson I've learned through my record-keeping is the correlation between water temperature and fish activity. Through a careful recording of stream and lake temperatures I know I can catch largemouth bass even before the first daisy has bloomed in the garden and hook wild trout in the dead of winter if the water temperatures are cooperative.

I'm often out angling for fish that other sportsmen don't pursue until the guidebooks tell them to go. In some cases, this gives me an unusual fishing year. It also provides a lot of peace and quiet because I avoid the regular seasons and crowded conditions.



SOUTHEAST PENNSYLVANIA TIMETABLE

*Rick Bodenschantz on Perkiomen Creek,
Montgomery County*

With a thermometer and my records as a guide, I start my year here in the southeastern corner of the state like everyone else, on January 1.

Relieving cabin fever

Like thousands of anglers I once spent my winters buried under the proverbial woolen blanket. I tied a lot of flies, which is good, read a lot of books, which is also good, and watched too darn much TV. I still tie more flies in the winter than at any other time and I can't put down a good mystery novel or a western. But now, with Jack Frost nipping at my nose, I go fishing even when there is snow on the ground. Quite simply, two things have made this possible: Gore-Tex clothing and neoprene waders.

From January to March, 5mm neoprenes keep me warm in

the coldest water. No amount of long underwear does the job that neoprenes do.

My winter fishing consists of two species trout and walleyes, with the former making up the vast number of excursions. Here in the southeast, many of our small streams are fishable throughout the snowiest years. The Little Lehigh, Bushkill, Tulepehocken and Valley Creek are the most popular regulated waters. During the winter of 1993-94, with its record-breaking snowfall, I was still able to fish one of these streams about every other week. In a mild winter I fish them a lot more.

You'll notice that all the streams I mentioned have one thing in common: They all have a catch-and-release area. In these special zones, which now receive a fall stocking or are managed with fingerling trout, anglers stand a good chance of finding hungry fish.

The headwaters of Perkiomen Creek in Berks County offer wild trout. You can enjoy summer action on the lower end of Perkiomen Creek for bass, rock bass and red-breast sunfish. For those bass and panfish use ultralight spinning tackle and small worms.



Wild brown trout, Perkiomen Creek, Berks County

The Southeast also has nearly 100 miles of wild trout streams, and these also offer excellent opportunities for off-season angling.

Winter trout fishing is best done slow and deep. Large, dark nymphs, such as generic stone flies and Woolly Buggers, as well as Pheasant Tails and bead heads, are the best producers for both wild and holdover browns. Fall stocked rainbows also respond to Glow Bugs, or egg flies.

I fish for trout each year from the fall of the previous season right on through opening day. I know this backward fishing is regarded as heresy in some corners, but I'd rather work hard for a few fish in the so-called off-season than fight the crowds and fresh hatchery trout during a lot of the traditional season. Then again, part of my rationale for this activity is the fact that by the time opening day rolls around, I'm usually out catching largemouth bass and panfish in the Southeast—for another unusual season.

I know I'll raise a lot of eyebrows when I say that by the close of bass season in mid-April I have already landed some 50 largemouth during a good year.

The key to this success depends on two things—a little nice weather, of course, but just as importantly the availability of farm ponds and shallow lakes.

My records from one particular mid-March period read like this: "With temperatures in the low 70s for the past three days the bass think it's more like May than March. Today, in mid-afternoon, I caught four bass and three fat bluegills on my 8-weight fly rod, using a black Woolly Bugger. Around me the call of spring peepers was as loud as a teapot's whistle."

Or these notes from another early season: "Water temperature at only 53 degrees. But with the sun shining strongly all this week the bass are taking a black jig and pig gently dropped alongside last year's cattails."

The key to late winter and early spring bass is to fish shallow water where the sun will turn the fish on. Unfortunately, I have just as many disappointing records that show that I returned to a farm pond or lake the day after catching a bunch of fish, and because the weather had become cooler and cloudier, I went home empty-handed.

In the last few years, with early season shad fishing either relatively slow or an outright bust, I regularly hit a few lakes and ponds to catch largemouths and bluegills right up until the season closes in mid-April. If I choose, I can continue working these same locations for panfish until my attention is drawn elsewhere.

Had by the shad

Each year the local papers are full of information on the status of the annual shad migration. It used to be that old-timers would watch for the shad flower to bloom along the river banks as an indication of when to hit the water. These days all you need to know is contained in the back pages of the sports section.

I have fished for shad with some of the best shad fishermen around—anglers who have won tournaments and anglers who consistently score better than most others. But in the last three years, the way these fishermen have complained, I don't mind confessing that the traditional prime time to fish for shad in the lower Delaware—usually the last two weeks in April and the first week in May—has been a bust for me since 1993.

Yes, I've caught fish and yes, I've seen anglers who miraculously landed a couple of dozen shad in one afternoon because they happened to be sitting on a dime-sized piece of real estate where the fish were stacked. But plagued by either high water or cold

water temperatures, shad fishing has been slow during the early season, particularly for the shore angler—which is where I like to fish for shad.

Last year, shad fishing really took off for me, and the other anglers who hung in with it, from the second week of May until early June. But I'm jumping ahead of myself.

Hybrid stripers

Doing poorly with the migrating shad and facing a closed bass season, a few years ago I started looking around for another catchable trophy fish. That fish has become the hybrid striped bass.

Landlocked stripers are traditionally considered night feeders, and this becomes true when a cool spring turns to a hot summer and the water skiers take over our southeastern impoundments. But in early spring, with the water temperature hovering around 55 degrees, the hybrids are consistently daytime feeders.

Once again, the key to success is finding shallow water that warms slightly on a bright afternoon. When I started fishing for spring stripers I was amazed to discover that most strikes occurred in narrow coves off the main body of a lake. By mid-March the stripers were already chasing the lake's forage into the back waters and feeding pretty much throughout the day.

Fishing can be hot from noon to 2 pm, die off for a few hours and come back strong in the evening. Or there could be a strong bite throughout the afternoon that would fizzle as the sun started to sink. It is nearly impossible to tell at which time of the day the bass would hit. In the early spring you just have to be there.

At Lake Nockamixon in Bucks County and Blue Marsh in Berks, two southeastern lakes where an early spring bite occurs, stripers are taken below the surface on 1/2-ounce white bucktail jigs adorned with plastic trailers, or just below the surface with plastic stick baits. I've had wonderful success with a fly rod using a simple Woolly Bugger pattern tied to look like a minnow.

The fly is constructed with a tail of white or gray marabou and pearlescent Krystal Flash and a weighted body of silver-metallic chenille and grizzly hackle. Underneath the hackle I lay a peacock herl on either side of the fly to imitate a minnow's lateral line. I call this easy-to-tie concoction the Heavy Metal Minnow. Other patterns that work are a white Deceiver and white Strip Leech.

Striper daytime fishing lasts until about mid-May when the water temperature climbs into the mid-60s. Then it's either back to the shad, which hopefully are now cooperating, or onto two other great Pennsylvania fish, the pickerel and the crappie.

Cure for summertime blues

The season's next phase is a summer smorgasbord. Beginning about the second week of June and running through mid-August, I fish for just about every fish the state has to offer.

If I had only one month a year I could fish, I'd choose the month of June (September would be a close second). The 30 days of June gives me a chance to nab either big spawning cats, fat bluegills, crappies and redbreast sunnies, and when the season opens in the middle of the month, stream and river smallmouths, and pond and lake largemouths. Of all of these I dream the most about the smallmouth.

On a light spinning rod or medium-weight fly rod, smallmouth bass put up a darn good fight. There are so many waters in the region to fish for smallies that bass should be declared the southeastern state fish.

The streams in which I've caught a plentiful number of bass would fill a page in the summary of regulations and laws. But some of my favorites in this region are the Manatawny in Berks County, the Perkiomen in Montgomery, and the Tohickon in Bucks County. You won't find trophy fish in these streams, but their sheer number makes up for their lack of size. And in between the smallmouth you'll catch an array of redbreast sunfish, rock bass and the occasional crappie.

Early last summer I came across a dedicated bait fisherman, Rick Bodenschantz, working his way down the Perkiomen catching bass after bass, and redbreast after redbreast. Rick was using the simplest rig, a baited hook with a small splitshot pinched about 18 inches above the line's business end. I watched him for more than a half an hour as he slowly and carefully probed a wooded shoreline with worms and grubs.

It was his close investigation of the available cover that netted him a lot more fish than I had caught that morning, and this simple but effective technique is a good way for anyone to approach a smallmouth stream. Rick and I were the only anglers in the vicinity that day, but when I went for a drive that afternoon I couldn't help noticing how crowded the trout streams were.

Good smallmouth fishing in rivers like the Delaware and Schuylkill tapers off when the water temperature rises above 78 degrees. You can still catch a few fish on live bait in the mornings and evenings, but from long experience, I know that lure fishing really drops off when the thermometer continues to climb. However, if you can find a long grass bed, which for some reason the southeast region does not have in abundance, surface fishing on summer evenings can be worthwhile.

The fish I really want to pursue on those dog days of July and August is the largemouth bass. I travel to Pocono lakes like Shohola and Pecks Pond and start fishing at 4 a.m. for bass that know they better eat in the morning because the rest of the day will be too hot to do anything but lie under the weeds and drink soda. The lures I use for this stars-to-sunrise activity are as time-honored as Izaak Walton—the black Jitterbug and the black-and-gold Rapala.

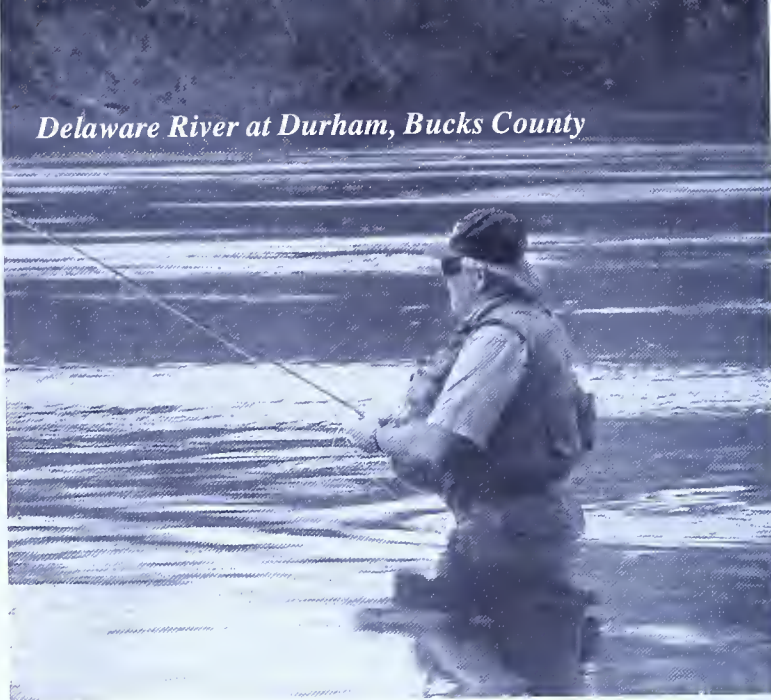
I wasted a lot of time in my early years of night fishing going to lakes that did not have clear water. There's a muddy, algae-covered reservoir less than a quarter-mile from my house in Montgomery County, and I have not caught a bass at night in that water for years. But travel to a lake where the water is clear or has a light tannin stain and you'll find the bass a lot more cooperative when the moon is up.

The key to dancing in the dark with a largemouth is the retrieval speed of your lure. At night, things move very slowly when they're on the water so they don't attract attention. Your lure should also be worked slowly with an occasional twitch and pop. Of course, if the bass are really active and the water is in a constant turmoil from feeding fish, then you should also speed up your retrieve, but this is a rare occurrence. Listen for those sounds in the darkness to tell you how to fish those muggy summer nights.

Mid-fall and winter returns me to the narrow streams of the Southeast with nearly 100 miles of wild trout waters for the picking. Water temperatures have dropped drastically by this time, but as long as the thermometer reads over 50 degrees, I can catch wild browns and brookies with slow-moving nymphs and streamers.

On those rare days late in the season when the air temperature climbs into the upper 60s or low 70s, I might see a thin hatch of caddises or blue-winged olives and nab those trout eager to get a last meal on the wing.

Delaware River at Durham, Bucks County



Often I'm the only person on a stretch of water at this time of year. Still, when fishing wild trout water I hold fast to a personal rule: Never fish the same section of stream within a two-week period. I've set this standard because I believe the fish can not handle the stress of frequent battles and it keeps the trout unaccustomed to my offerings.

This rule also keeps me moving from stream to stream. If other anglers would adopt it, I believe those waters that seem to be hammered time and time again would look a lot less like a fly fishing metropolis.

And this is how I spend my fishing time in the southeastern corner of the state. In 12 months I have caught about 15 species of fish and maybe one more if I've put in my time searching for river muskies. In a regular year my local waters have given me everything from a striped bass to a bluegill, and all I had to do was be at the right place at the right time.

ANGLER

MY UNUSUAL FISHING YEAR

January 1 to March 31. Wild trout in nearly 100 miles of Class A streams in the Southeast.

March 1 to mid-April. Largemouth bass and panfish in shallow lakes and farm ponds. After bass season closes, fish for panfish.

Mid-March to early May. Hybrid striped bass in shallow coves of large impoundments.

May through June. Shad and pickerel in the Poconos.

Early June. Redbreast sunfish and smallmouth bass in small streams.

Mid-June. Panfish and smallmouth bass in streams and rivers, catfish in the Delaware and Schuylkill.

Late May, June, July, August. Striped bass in the Delaware. Largemouths in deep lakes and farm ponds. Smallmouths in rivers. Night fishing for largemouths later in the summer.

Late August, September. Big smallmouths in the rivers. Largemouths and panfish all over.

Late September, October. More largemouth bass, fall wild trout and second-season trout stockings.

November, December. Stocked and wild trout. —VA.

A Crayfish for the Long Rod

by Chauncy K. Lively

Crayfish are among the meatiest of all freshwater crustaceans. Often reaching a length of four inches, they offer a substantial mouthful to a wide range of fish, from bass to trout and from pike to carp. Indeed, I know of more than one startled Allegheny River fisherman who suddenly found himself attached to a large musky while fishing "crawdads" for smallmouth bass.

Once, when I was fishing popping bugs along the shallow edges of the river below Big Sandy Creek, a chap anchored his boat in a deep hole opposite me. He was fishing soft-shells and we exchanged bits of conversation over the water. Suddenly, he yelled and his spinning rod took on a deep bend as his line slowly moved downstream. Unable to control an obviously heavy fish, the angler lifted anchor and followed the fish down the eddy. Thirty minutes later, and nearly a half-mile downstream, a tired fisherman beached a huge carp that must have weighed at least 30 pounds. Don't tell that angler the carp is not a sporting fish!

Smallmouth bass have a particular fondness for crayfish, and in waters where these crustaceans are plentiful, the bass are likely to grow large. The crayfishes have five pairs of legs, the first pair armed with large, prominent pincers. Typical of all crustaceans, they have a hard outer shell, or exoskeleton. In some species the carapace—the protective covering of the thorax—is smooth. In others it is spiny. The abdomen consists of six jointed segments that are activated to provide swimming locomotion.

From time to time the exoskeleton becomes soft to permit molting and renewal of the exoskin as the crayfish grows. Their typical habitat is under flat rocks or in burrows dug in mud banks. The so-called Chimney crayfish build deep vertical burrows in stream banks about a foot or so back from the water. They dig out

chambers near the bottom that fill with water and offer safe haven. At the tops of the burrows, turrets resembling chimneys are built—hence, the name.



Our crayfish pattern is the product of several subtle modifications in an original pattern we first dressed about 20 years ago. Back then it was a good fish-getter, but the present version is considerably more durable. To achieve the ovoid body profile of the natural crayfish, I first cement an underbody of sheet aluminum to the underside of the hook's shank. The underbody is about 1/8-inch wide and occupies the forward three-quarters of the shank, allowing space behind the eye for the whip-finish. After the cement has set, I coat the underbody with rubber cement

to prevent the thread windings from slipping around the curved end.

The prominent pincer legs are dressed with red squirrel tail hair set in a "V" conformation. After setting the angle of the legs I wind three or four close turns around the hair at the base of each leg and apply a heavy coat of cement to the windings. This helps to retain the spread of the legs when the hair is wet.

The carapace is fashioned from a strip of polystyrene prepared by sanding both sides with fine sandpaper and tinting with a brown marking pen. The thorax is a coarse dubbing of any brownish-orange fur mixed with long guard hairs from muskrat, mink or beaver fur. The abdomen is made of brown Body Glass wound in

close turns.

For river smallmouths I like to fish the crayfish in riffles, casting cross-current and retrieving in short spurts as it swings downstream. The shallow edges of eddies are also locales worth watching, particularly late in the day. Big bass often cruise among the exposed rocks at such times, looking for crayfish, tadpoles or schools of minnows. The telltale wake of a bass in thin waters gives him away and a well-placed cast in his path often does the trick. However, it's advisable to keep a low profile because bass become very spooky in this situation and if he sees you he's likely gone.

Big trout love crayfish, too, and many trout anglers overlook carrying appropriate patterns. Work a crayfish along a log jam or brush pile adjacent to deep water and hold on to your hat. I remember walking back to my car along the banks of the Letort at dusk and seeing the heavy wakes of big browns over the dense beds of elodea. Likely they were foraging for crayfish that had left their burrows in the bank to feed. That was many years ago and in those days I carried crayfish patterns only in my bass kit. You may be sure I don't suffer that oversight today!

Dressing: Crayfish

Hook: Size 6 to 10, 3X or 4X long.

Underbody: Sheet aluminum strip 1/8-inch wide.

Thread: Brown 6/0, prewaxed.

Pincer legs: Red squirrel tail hair.

Eyes: Heavy monofilament.

Carapace: Prepared polystyrene sheet, tinted brown.

Thorax: Heavy dubbing of brownish-orange fur mixed with guard hairs.

Abdomen: Brown Body Glass.

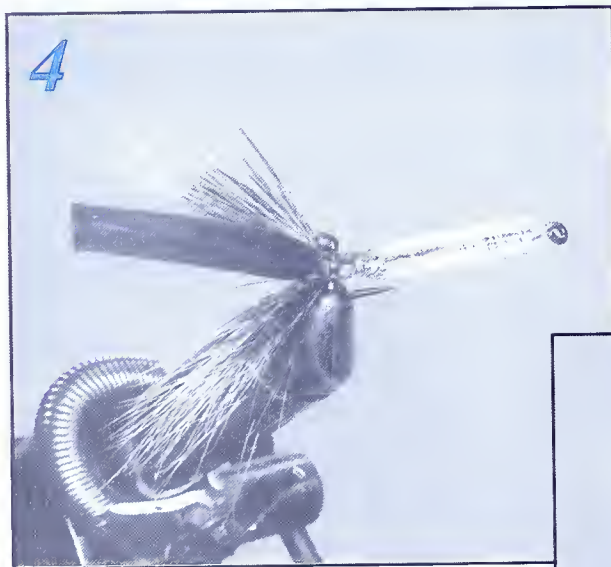
A Crayfish for Long Rod



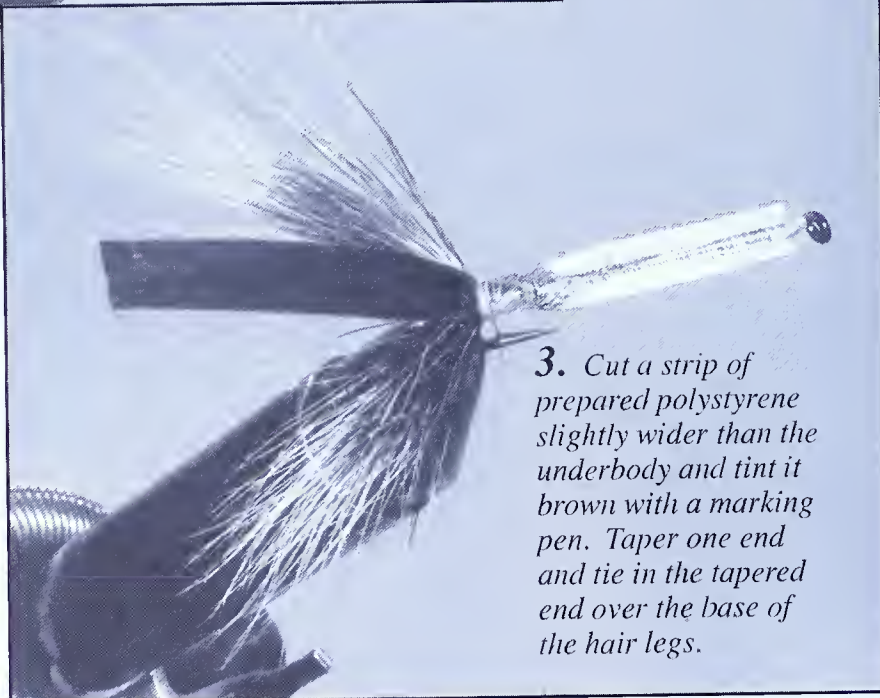
1. Cut the aluminum underbody to shape shown at upper right (in tweezers). Cement the underbody to the underside of the shank. Coat with rubber cement. Tie in the thread behind the eye and wind back to the rear of the underbody.



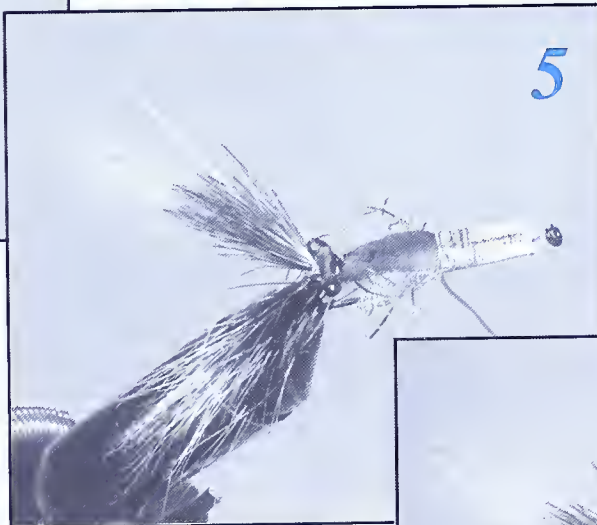
2. Cut a bunch of hair and tie it in at the bend. Separate the hair into two halves and wind between to form a "V." Make three or four turns around the hair at the base of each leg and cement the windings.



4. Prepare the eyes by holding a 1/2-inch length of heavy monofil with tweezers and heating the ends with a match or lighter until a ball forms at each end. The result should resemble a miniature barbell. Tint it black with a marking pen and tie it in over the carapace winds.



3. Cut a strip of prepared polystyrene slightly wider than the underbody and tint it brown with a marking pen. Taper one end and tie in the tapered end over the base of the hair legs.



5. Bring the carapace strip over the eyes and bind it down with two turns behind the eyes. Lift the free end of the carapace out of the way and make a loop dubbing of mixed fur and guard hairs. Wind working thread to mid-shank and wind dubbing to this point. Tie off and trim the excess. Next, stretch the carapace over the fur thorax and tie it off. Trim the excess. Then tie in a length of Body Glass at the end of the thorax.

6. Wrap the Body Glass forward in close turns and tie off behind the hook's eye. Trim the excess. A whip-finish of the thread behind the eye and a drop of lacquer on the finish complete the Crayfish.



On the Water

with Charles F. Waterman

Master Reels

Fine automobiles and well-tuned outboard motors are supposed to purr. Expensive light fly reels are supposed to squeal. As a callow youth I was proud of the civilized mutter when I stripped line from my eight-dollar prize. I learned later that a high-grade click is supposed to be noisy. Never mind that the cheap old reel that wouldn't cry is still working after all these years.

A long time ago, American fly rod manufacturers got into some competitions that proved to various experts' satisfaction that they made the best in the world. It didn't work out so well with the fly reels. Oh, there were a few prestigious American models, but the British cornered most of that market. For a long time the experts said a reel for light fly fishing was simply to hold extra line and that most any kind of a spool would work fine.

Then I got a wake-up call. In a brief chance at immortality I was asked to catch a trout for a movie cameraman and I appeared with a clean shirt, my nearly new Christmas vest and unpatched waders. The movie folks held a conference and then asked me if I didn't have a reel besides that inexpensive, black American model. Could I borrow an English one with a little more glitter?

I emerged from the cutting room with a new perspective. After that I bought a pretty good reel with a nifty click and close tolerances. I was very proud of it until I got some dirt in it, when it refused to turn until it had been rinsed out, and I was embarrassed at my crude handling of a precision instrument. It was the next season when I slipped on a wet log and skinned my knee, also bumping the precise little reel on a rock. After that it would not turn and I took it to a tackle repairman who examined it as if checking a life-threatening injury.

"I don't know any way of straightening that spool until it's perfectly round," he said. "You might try a jeweler."

I did, and the jeweler laughed, but I had never liked him very much anyway.

I have pondered the value of a loud click, which was one feature of most of those expensive reels. For one thing, if you are catching

trout big enough to take line, everyone on the creek knows when you have hooked a fish. If you have a reel with a soft click, your nearby friends have no way of knowing you have the hatch figured out. On the other hand, if you are near sneaky strangers, it's a dead giveaway if you hook a fish and they are apt to move into your pool. However, the noisy click is a status symbol we cannot ignore. Someone said there is a clique of people who love loud clicks. That's only mildly humorous.

A forbidden subject among really advanced anglers is the automatic reel, a mechanical contrivance that stores your line (generally with no backing) and takes up slack instantly, keeping it from under foot. It has saved thousands of dollars worth of fly lines that would otherwise have been severed by wading cleats or edged rocks. It is not made to handle big fish, but some people who have never caught a fish over 15 inches consider it a sign of cultural depravity, and although they cannot remember the color of their backing they don't want to take a chance with long runners.

I have seen some beautiful custom reels, and the ones intended for really heavy fishing have no clicks at all, because that would interfere with smooth running when a fish goes. One designer, however, showed a beautifully built click that sounded when you take up line. This puzzled me because I know when I am taking up line, even

when I am excited, and I mentioned it. He explained that if I were fishing with a guide it was essential that the guide know when I am retrieving line. I had never thought about that but I have one of the reels, which I used a great deal until I realized that it was a little large and made my fish look smaller in pictures. I now use it only on bigger fish and hold it back against my stomach when a fish and I have our picture taken.

I looked at a reel display in a pretty good shop the other day. I couldn't find any of the inexpensive old favorites and the dealer said he didn't handle them. Not costly enough for now, he said. He did have a simple little number with no drag for \$189.



ANGLER

Streams *for Catching January Trout*

by Charles R. Meck



*Inset above, Beadhead Pheasant Tail Nymph.
At left, Lady Ghost.*

Last year several days proved to be another "January thaw" with temperatures in the high 40s. Bryan Meck and I entered a slow section of the Little Juniata where we had seen trout rising the day before. After we waded into the river a fair hatch of dark-gray midges appeared on the surface and the first trout fed on them. Soon Bryan and I had a pod of more than a half-dozen trout rising upriver from us. More than half of these feeding fish took our size 20 Dark Gray Midge patterns. The hatch lasted and trout rose for more than two hours that January afternoon. What a way to spend a January afternoon!

A week later I invited Chuck Furimsky of Rockwood to fly fish for rising trout in late January. Chuck ties some of the finest flies I've seen in my more than 40 years of fly fishing. I asked Chuck to tie a dozen Dark Gray Midges and to meet me on the river near Petersburg. We agreed to meet at 11 a.m. because any feeding action usually occurs from noon to 4 p.m. on most January days. If you plan to fish over rising trout, especially those rising to a small midge, then plan to fish slow-water areas. When feeding on these small downwings, trout spend as little energy as possible taking the food—otherwise they'd use up more energy than they gain from eating these diminutive morsels. Don't overlook using a midge pupa pattern. Often these patterns fished just under the surface work on highly selective trout.

Chuck and I arrived at the tail of a long pool. By the time we had assembled our fly rods, put on enough cold-weather gear to protect ourselves, and arrived at the river, we already saw a pod of more than a half-dozen trout slowly, methodically sucking in dark-gray midge naturals. Chuck proceeded to catch more than half of the risers before we looked for additional rising trout at the upper end of the pool.

Do you think it's unusual to encounter feeding trout in January on Pennsylvania streams? No indeed not! You can travel to many streams across the Commonwealth and experience hatches and feeding trout, even in midwinter. But even if you don't encounter a hatch and rising trout, you can catch trout. You'll find a good supply of trout on many Keystone streams and rivers.

Many of the Commonwealth's dozen or more top limestone streams hold fairly moderate temperatures throughout the winter. Moderated by springs, many of these streams boast temperatures in the 40s and have little ice along their shores



*Confluence of Spring Creek and
Bald Eagle Creek at Milesburg,
Centre County*

in midwinter. Waters like the Little Lehigh in Allentown, Little Bushkill in Easton, Fishing Creek near Lock Haven, and Spring Creek and Logan Branch near Bellefonte hold a good number of trout.

Compare these limestone streams with many of the state's freestone streams in winter. Many of the freestone streams lack the buffer of spring water and harbor ice and water temperatures often near or just above freezing. I'll never forget the day I took a temperature reading in a small central Pennsylvania stream in the midst of a July heat wave and recorded a 54.9-degree reading. The following January I again recorded the temperature and it showed 48 degrees on the same stream. These more moderate temperatures of the state's limestone streams produce more winter hatches, especially midges, and more active trout.

Don't overlook some of the state's tailwaters when you fly fish in January. Pohopoco Creek below Beltzville Reservoir near Lehigh, the Youghiogheny River at Confluence, Codorus Creek near Hanover, the Allegheny River near Warren, and the East Branch of the Clarion River just north of Ridgway all hold January trout and fairly moderate water temperatures for midwinter. Water from the bottom of dams produces midwinter temperatures in the high 40s and low 50s downriver.

Look at just a short list of some of the more productive waters in January.

Fishing Creek (Clinton County)

Don Bastian of Cogan Station fly fishes this stream almost every month of the year. Don often boasts about the high productivity of this stream and the hatches it holds. Even in January Don often finds midges emerging and trout rising.

Spring Creek (Centre County)

Ask Mark Jackson of Hollidaysburg just

how effective fishing can be on Spring Creek in January. Recently Mark fished a section near Lemont and landed 45 trout. One January afternoon and 45 trout—not bad!

Steve Sywensky of Lemont, an expert fly tier and fly fisher, does consistently well on central Pennsylvania's Spring Creek throughout the winter. Steve prefers using a Little Black Midge pattern to match the afternoon hatch on those January days. Steve believes that Spring Creek is one of the most reliable streams an angler can fish during the winter, with Big Spring in southcentral Pennsylvania a close second. Steve often uses sow bug imitations on Big Spring in January.

Yellow Breeches

Bob Eichler of Frederick, Maryland has a ritual. He and several angling friends start off the New Year fly fishing on the Yellow Breeches and Falling Spring in southcentral Pennsylvania. No, they don't have spectacular days, but they do catch trout, and they do kickoff the New Year fly fishing. Bob often opts for a marabou streamer or a Clouser Crayfish. Both patterns produce trout in early January.

Lower Bald Eagle

Bob Budd of Altoona occasionally fly fishes in midwinter. When he does he often relies on large patterns like the Woolly Bugger. On one fishing trip to the lower Bald Eagle on New Year's Eve, Bob found a heavy holdover rainbow trout that took the huge pattern. On that New Year's Eve day the water temperature on the lower Bald Eagle held in the low 40s.

Codorus Creek

Bryan Meck fly fishes Codorus Creek at Menges Mills near Hanover in January and February. He most often uses Bead Head Pheasant Tail Nymphs and Woolly Buggers on these winter fishing trips.

Streams for Catching January Trout

Within the past two years he's averaged four or five trout on these midwinter trips to the Codorus. Bryan's caught brown and rainbow trout up to 15 inches long.

Youghiogheny River

Ask Craig Cheselke if the Youghiogheny holds January trout. You'll find Craig and his son fly fishing this river almost every month of the year. Craig often drifts the section from Confluence downriver to Ohiopyle. Craig especially likes the section below Confluence around Bidwell Station and the section just below the dam at Confluence.

Paul Miller of Connellsville has fly fished the Youghiogheny River for almost two decades. Paul prefers the Treatment Plant near South Connellsville in midwinter.

Little Bushkill Creek

On many January afternoons you'll find Rich Keesler of Easton fly fishing on the Little Bushkill. He's fly fished this fertile limestone stream near Easton for almost 20 years. Just about every day he finds a decent midge hatch on the stream. Rich uses a midge pattern or a size 20 to 24 Griffiths Gnat with a great deal of success. When Rich doesn't see trout rising to a midwinter hatch on this stream, he uses a Hare's Ear or Pheasant Tail Nymph with a great deal of success.

In late January and early February Rich often sees trout rising to a premature hatch of little blue-winged olive duns. He matches this late-winter mayfly hatch with a size 18 or 20 Little Blue-Winged Olive. With air temperatures in the low to mid-40s these mayflies often have trouble escaping from the surface.

Ridley Creek

Southeastern Pennsylvania anglers have some excellent fly fishing near Media on Ridley Creek. Barry Staats, a local fly fishing authority, frequents the stream in January and February. Fly fishing on this Philadelphia-area stream is enhanced through the cooperative efforts of the Delco Manning Chapter of Trout Unlimited and the Fish and Boat Commission. Together they plant a good number of fish in the fall and provide great trout fishing throughout the winter months.

Barry prefers using a Black Stonefly Nymph in midwinter to match the heavy number of naturals that Ridley Creek holds. When these adults emerge, Barry says that trout chase them a couple of feet, even in the cold January waters. Barry surmises

that these fish haven't had much food for a couple of months and when they see these downwings they eagerly chase them.

Little Juniata River

Several years ago Jim Ravasio asked me to meet him for some midwinter fly fishing. I met Jim on the Little Juniata River just above Barree for an afternoon of fishing.

I handed Jim a size 12 long-shank Green Weenie. Jim sized up the pattern and asked whether it would work in cold weather. I assured Jim it would as I tied on the same pattern. Before that cold afternoon ended, Jim landed a half-dozen trout on that weird-looking pattern. The Little Juniata River produces some good trout fishing all winter long. As I said in the opening story, on many January afternoons you'll find midge activity. Look for trout rising on slower sections of the river.

Patterns

Which patterns work best when fishing for midwinter trout? You might be among the majority of anglers who think winter fly fishing means large wet flies. That's not always the case, however. Just ask devoted midwinter fly fishers like Rich Keesler or Steve Sywensky about patterns for January fishing on Pennsylvania streams. Both anglers often match midge hatches with a size 20 to 24 midge or Griffith's Gnat pattern. The Griffiths Gnat is nothing more than a size 20 to 24 fly with a peacock body and a grizzly hackle. Rich also uses small nymph patterns like a size 16 or 18 Pheasant Tail Nymph and a Hare's Ear.

Remember that you'll find water temperatures at this time of year ranging from 32 to 50 degrees depending on the waterway. We said earlier that limestone streams like Spring Creek and Falling Spring Branch often hold temperatures in the low to mid-40s, whereas freestone streams like Kettle, Pine and the First Fork of the Sinnemahoning rarely rise much above 40 degrees.

If trout aren't rising to an occasional little blue-winged olive hatch or a dark-gray midge, then it's time to think about wet flies. Large wet flies like the Green Weenie and Bead Head Woolly Bugger work well if fished fairly slowly in cold water.

Bryan Meck uses the Bead Head Woolly Bugger throughout the winter on Codorus

Creek near Hanover with great success. Smaller bead-head patterns like the Bead Head Pheasant Tail Nymph work year-round, and stonefly nymphs like the Woven Stonefly Nymph produce strikes even in midwinter.

Bead-Head Pheasant Tail Nymph

If I had one pattern to use an entire year it would be the Bead Head Pheasant Tail Nymph. In cold water in midwinter I often opt for a size 12 or 14 pattern instead of a smaller one.

Black Stonefly Nymph

If the stream you plan to fish holds a midwinter stonefly hatch, then you can expect stonefly nymph patterns to work. They work well on Ridley and Yellow Breeches creeks in southcentral and southeastern Pennsylvania.

Little Black Midge

On many January afternoons on streams and rivers throughout the Commonwealth midges appear. If they appear in concentrated forms you'll find trout rising to them. I prefer a size 24 pattern with a black or dark-gray body.

Streamers

Bob Eichler of Frederick, Maryland uses marabou streamers when he fly fishes in winter. The Black Marabou, fished slowly, often produces when the water temperature holds near 40 degrees. Don't overlook the Lady Ghost streamer. This pattern has consistently produced strikes in cold weather for me for the past two decades.



Wet Fly Tactics

Fish the pattern deep. Remember that water temperatures even under the best of conditions at this time of year rarely rise into the 50s. Therefore trout often stay—and feed—in the deepest sections of the stream. Fish the deep riffles at the head of pools and work your patterns slowly. Trout at this time of year don't swim as quickly as they do when the water temperature rises.

Look for hatches. As I indicated before, on some streams and rivers you will encounter hatches of midges or little blue-wings. If you do, consider yourself fortunate and fish the hatch. Look for these hatches to appear in January at the warmest part of the day—early afternoon. If you don't see any hatches, then fish your patterns slow and deep. —CM.

KINZUA CREEK WATERSHED

BY ROBERT L. PETRI



Kinzua Creek at TallyHo

The valleys between the flat-topped ridges of the Allegheny National Forest in McKean County are laced with a variety of trout streams of all sizes and descriptions, from tiny brook trout waters that tumble from rock to rock down narrow hollows to larger, more powerful streams that sweep past knots of hunting camps and crossroads villages on their way to meet the Allegheny River.

KINZUA CREEK

WATERSHED

Many of these waters feed the Allegheny Reservoir, 12,000 acres of cool, deep water nestled in the rolling mountains along the border between Warren and McKean counties. With the exception of the Allegheny River itself, the largest and most significant of these waters that feed the reservoir is Kinzua Creek.

Against a backdrop rich in history and scenic beauty, Kinzua Creek carves a 24-mile path through the heart of the eastern portion of the Allegheny National Forest to meet the Allegheny Reservoir and form the narrow, eight-mile-long portion of the reservoir known as Kinzua Bay. A long bridge on PA Route 59 now spans the bay at the point where Kinzua Creek joined the Allegheny before the completion of Kinzua Dam in 1966.

The significance of Kinzua Creek among the streams of the Allegheny Highlands goes beyond its dominant size. Kinzua Creek is also one of the best trout fisheries in the Allegheny National Forest. There are many water types here to meet almost any angling preference, from long sections of pocket water to deep, placid pools with undercut banks and downed trees to provide trout cover. A modest population of wild brown trout is supplemented by stockings by the Fish and Boat Commission and with trout produced by the efforts of local sportsmen's clubs enrolled in the Commission's Cooperative Nursery program. Because it flows for the most part through the publicly owned confines of the Allegheny National Forest, access to Kinzua Creek is excellent.

Kinzua Creek rises in a series of boggy meadows and beaver dams near the village of Cyclone, about 10 miles southeast of the city of Bradford. These upper reaches of the stream flow slowly across the flat ridge top, and the open nature of the terrain allows the Kinzua headwaters to warm considerably. Few trout inhabit this section of the stream.

Kinzua Creek gathers a number of small tributaries shortly after it intersects PA Route 59 about two miles west of the village of Ormsby, and the nature of the stream begins to change. As it falls off the wide, flat ridge top, the gradient of the stream begins to increase, forming pockets, riffles and pools to provide trout habitat. At the same time, a fairly dense forest begins to close in around the banks of the stream, providing a dose of much needed shade. In recognition of these changes in setting, the Fish and Boat Commission begins stocking trout at the point where Kinzua Creek bisects PA Route 59.

These upper reaches of Kinzua Creek are far healthier today than they were in years gone by. According to Fish and Boat Commission Area 2 Fisheries Manager Ron Lee, there were upwards of 200 oil and gas wells in the upper Kinzua watershed as recently as the late 1970s. A facility to dispose of the salt brine from these wells operated on the stream, continuously discharging untreated brine into Kinzua Creek and depressing life in the stream for a considerable distance downstream. This facility was closed in the early 1980s as was a sister facility designed to remove the phenols and heavy metals that can be part of the oil and gas extraction process. Some sections of upper Kinzua Creek near Route 59 still exhibit a streambed that appears to have been paved—the marks of past abuse. Yet, according to Area Fisheries Manager Lee, the water quality in these sections continues to improve, and with the closing of the brine and chemical plants, the water has become suitable trout habitat.

Downstream from Route 59, Kinzua Creek flows through a long section of roadless terrain, broken only by bridges at Kinzua Bridge State Park and at the village of Kushequa, farther downstream. With each passing mile, the stream becomes higher quality trout water. The gradient continues to increase, and as the stream picks up a number of small, cold tributaries such as Three Mile Run and others, a respectable trout fishery begins to bloom.

Jim Neely of Kane is an avid angler, and past president of the Kane-based Black Cherry Chapter of Trout Unlimited. He knows Kinzua Creek well. He prefers the section of the stream in the upper reaches near Kushequa. He cites the relatively light fishing pressure in this area, as well as Fish and Boat Commission stream surveys that indicate very good holdover of stocked fish, with some truly large individuals present, as well as a fairly healthy population of wild browns.

Kinzua Creek crosses into the Allegheny National Forest near the village of Guffy about three miles northwest of the town of Mt. Jewett. Forest Service Road 316 bridges the stream at Guffy, providing access. Neely reports that this section of the stream is also a very worthwhile destination, with numerous deep pools and other good holding water.

At the U.S. Route 219 bridge at TallyHo about two miles downstream from Guffy, a 2.3-mile delayed-harvest, artificial-lures-only project begins on Kinzua Creek, and extends downstream to the junction with Camp Run. Forest Service Road 321 closely parallels the south bank of the stream over the entire length of the project, providing easy access.

The project section of Kinzua Creek is one of the busier sections of the stream, but it also offers some of the most consistent fishing to be found in the watershed. The stream wanders through patches of thick woods and brief meadows, and there are numerous deep pools with downed timber to provide hiding places for the resident trout.

Commission stream surveys show excellent holdover of stocked brook and brown trout in the project, and the modest wild trout population found in the Kinzua Bridge to Route 219 section continues to hold its own in these specially regulated waters.

Below the downstream boundary of the project, Kinzua Creek sweeps past the tiny village of Westline, and continues west toward the Allegheny Reservoir. These lower seven miles of the stream from Westline to the mouth tend to warm somewhat in the summer, but still provide good fishing throughout most of the season.

From Westline to the mouth, Kinzua Creek is one of the largest trout streams of the national forest, averaging 50 to 60 feet in width in many sections. There are long, shaded riffles, abundant pocket water and a good number of deeper pools all through this section to provide cover for trout. This section of Kinzua Creek is not only stocked both before and during the season, it also is one of the waters selected for the relatively new autumn stocking program initiated by the Commission in selected streams across the state.

Despite having somewhat warmer summer water temperatures than the upper reaches above Route 219, these lower sections of Kinzua Creek still boast a good carryover of stocked trout throughout the summer, along with a scattering of wild trout. Area 2 Fisheries Technician Allen Woomer notes that stream



This brook trout was caught in Kinzua Creek near Kushequa. Remember—"low and slow" early in the season whether you fish baits, flies or lures.

surveys taken in the vicinity of Kinzua Creek's junction with Thundershower Run, a mile or so downstream from Westline, showed a "good spread of fish" across a wide range of size classes. In these larger downstream reaches, some of the deeper holes yield a number of browns in the 20-inch-plus class each year to those who take the time to learn the water.

Access to the section of Kinzua Creek below Westline is made easy by U.S. Forest Service roads that parallel both banks. Forest Service Road 321 follows the south bank of the stream and is accessible either directly out of Westline or off Forest Service Road 122, which leaves PA Route 321 about 12 miles north of the city of Kane.

Forest Road 321 also intersects the lower reaches of Meade Run, Kinzua Creek's only stocked tributary. Meade Run is a small stream where both wild and stocked brookies can be found in good numbers.

Forest Service Road 122 runs fairly close to the north bank of Kinzua Creek in the section between the mouth and Westline. Access is via PA Route 321, near the Red Bridge campground operated by the Forest Service. For a variety of reasons, including occasional heavy truck traffic, Forest Road 122 can be a rough haul for a conventional automobile, particularly in the early season when the winter frost is still working its way out of the ground.

The quality of the Kinzua Creek fishery falters as the stream comes into the open area in the mile or so above the mouth. The rise and fall of the level of the Allegheny Reservoir has made a meadow out of most of this bottom mile of stream, and there is a considerable amount of silt and debris here, as well as warm mid-season water temperatures caused by a lack of streamside shade. If you plan to fish the lower reaches of Kinzua Creek, get well above this area that is prone to flooding by the fluctuating level of the reservoir.

Tactics, techniques

Successful tactics and techniques for the trout angler on Kinzua Creek vary considerably depending on time of year and stream section. Kinzua Creek is a major waterway of its region and it has many faces, calling for flexibility in your methods and approach.

The opening day or early season angler would do well to concentrate efforts on the lower reaches of Kinzua Creek below Westline. These larger sections of the stream often have warmer water temperatures than the more narrow, shaded upstream reaches. In the spring, a few degrees difference in water temperature can be critical to success. Whether you fish bait, lures or flies, remember that the key to early season success is to fish "low and slow." Explore the deeper sections of the pools and keep your offering on or near the bottom. In the early season, this is where the trout will be.

As the season progresses and April gives way to the warmer days of May and June, extend your exploration of Kinzua Creek into the waters above Route 219 and the sections near Kushequa and Kinzua Bridge State Park. These portions of the stream display abundant pocket water and lots of large rocks and other in-stream obstructions to provide places where the now more active trout can wait to ambush drifting food items.

May and June also bring lower, clearer water to Kinzua Creek, so pay attention to your approach to the stream. Stay back and down when you cast to keep from spooking the trout. Use stream-side cover to mask your silhouette when possible. Even though heavier lines can be used in the high and somewhat murky waters of April, the lower water conditions of mid-season are your cue to go to lighter lines and equipment.

For fishing spinners and bait, an ultralight spinning outfit spooled with 4-pound test is a good choice. Bait anglers do best with redworms and live minnows drifted through the pocket water

and along deep, undercut banks. Spin fishers can have good success with smaller spinners and spoons cast upstream and worked past likely holding lies.

The mid-season conditions also bring out the best fishing in the delayed-harvest, artificial-lures-only project downstream from Route 219 at TallyHo. The special regulations in effect

here allow for the highest density of trout to be found anywhere in Kinzua Creek. May weekends often find this water fairly busy, but you can usually find a place of your own somewhere along the project's 2.3-mile length.

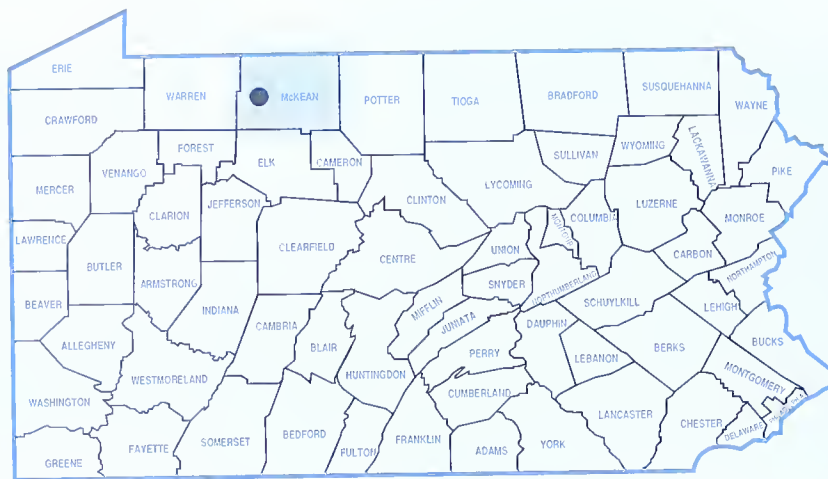
Even though most of the anglers you will meet along the Kinzua Creek project will be carrying a fly rod, the spin fisher can also do well here by paying special attention to some of the less obvious holding lies in the stream. Delayed-harvest trout can tend to develop a harassment complex from being constantly pressured by anglers, and they often opt to hold in places where somebody is not always bothering them. Look for them in side channels and in smaller pockets off the main flow.

Hatches

Even though Kinzua Creek offers a fairly good array of hatches for the fly angler, none is stronger or more important than the long annual emergence of various species of Isonychia or slate drake mayflies. Their characteristic elongated cases cover many of the rocks along the stream throughout the period from late May through early October. An Isonychia nymph in size 12 can be very productive at these times.

As with all Pennsylvania freestone trout waters, the advent of high summer brings with it some of the toughest angling conditions of the season on Kinzua Creek. Low, clear water calls for a very careful and deliberate approach to the stream. Otherwise, all you'll see are the fleeing shadows of the trout that used to be in the pool in front of you. Additionally, even though the entire stream stays cool enough for most of the summer to support trout, summer water temperatures remain coolest in the upper sections of Kinzua Creek, above Route 219. If you decide to sample Kinzua Creek during July or August, concentrate your efforts on these upper sections.

All along the 20-mile-plus length of Kinzua Creek, there is good trout fishing and fine scenery to be found. From the big water setting of the lower reaches to the more intimate surroundings of the headwater sections below Route 59, this waterway offers both variety and quality. Kinzua Creek is worthy of your inspection and some of your angling time. Give it a try this year.



A PLACE TO STAY

The U.S. Forest Service operates a number of public campgrounds well within striking distance of Kinzua Creek and numerous other fine Allegheny National Forest trout waters. The closest to Kinzua Creek are the Red Bridge Campground

along PA Route 321 just north of the mouth of Kinzua Creek, and the Kiasutha Camping and Picnic Area off Longhouse Drive (Forest Service Road 259) between Route 321 and Route 59 east of Warren. Both areas offer excellent facilities and a place to put down temporary anchor for the angler who is making an extended stay in Kinzua Country.

For more information on managed camping facilities in the Allegheny National Forest, write: U.S. Forest Service, 222 Liberty Street, Warren, PA 16365, or call (814) 723-5150.

The U.S. Forest Service also publishes an excellent map of the Allegheny National Forest, detailing all the forest service roads, as well as the locations of the region's abundant trout waters. The map is an all but indispensable tool for exploring the available fisheries in the Allegheny National Forest, and is also available at the Warren address given above. The cost is \$3.00 plus tax. —RLP.

BIG BROWNS

As with most of the trout streams that feed the Allegheny Reservoir, Kinzua Creek hosts a spawning run of big brown trout out of the reservoir each autumn. These heavy fish have spent the summer feasting on the abundant forage of the big lake and are measured in pounds rather than inches. Trout up to 10 pounds have been taken at the mouth of Kinzua Creek and other reservoir tributaries during these times. Mid- to late October generally provides the best opportunity to latch on to one of these bruisers.

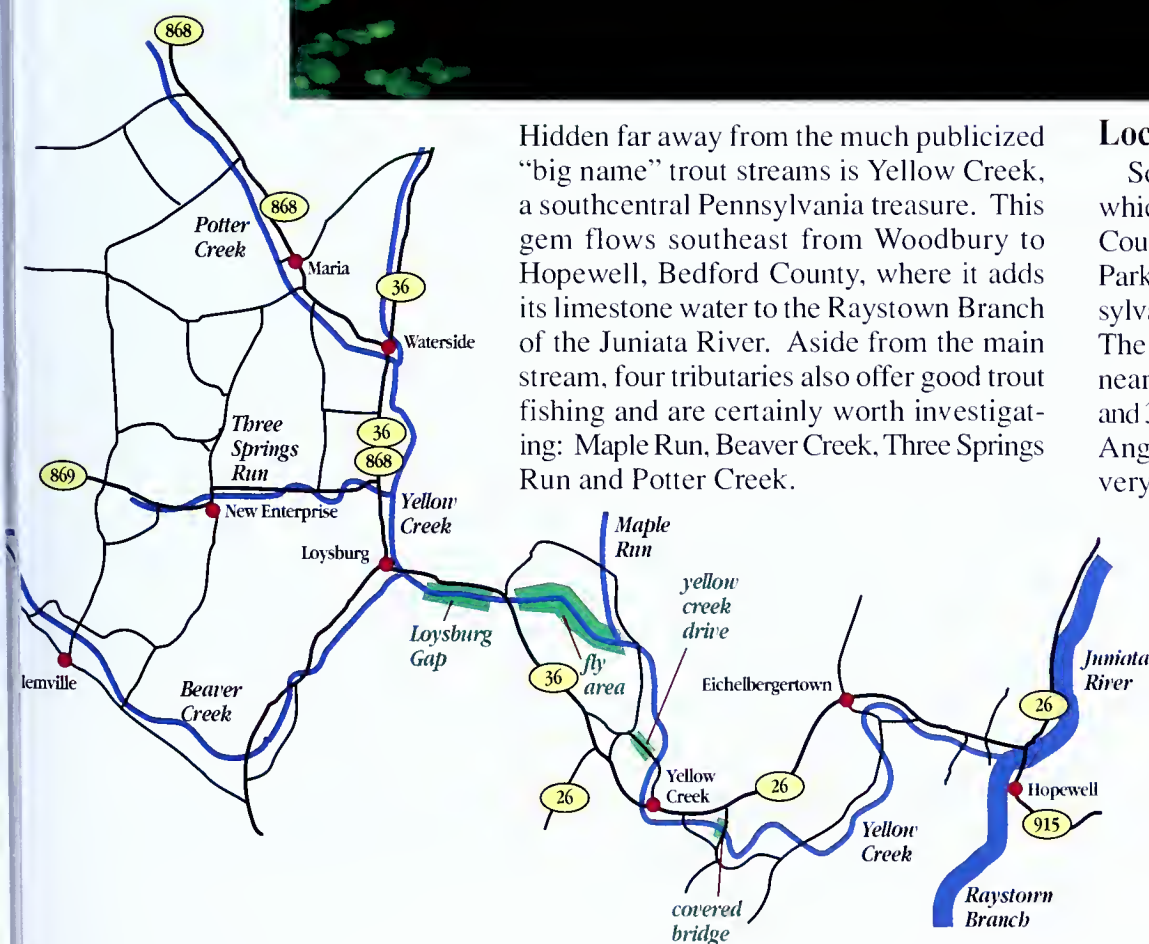
Even though the fish will travel a considerable distance upstream, some of the best fishing can be had in the channel of Kinzua Creek just below the bridge on PA Route 321 at the stream's mouth. Remember that these are big browns, strong and defiant, and they are not all that impressed by light tackle. Spin fishers should be prepared with a medium-action outfit, with at least 8-pound test. Fly anglers are best able to tame these fish with a heavier rod than what would be normally used for regular stream fishing. A 9-foot rod balanced for a 6- or 7-weight line is about right. —RLP.

The opening day or early season angler would do well to concentrate efforts on the lower reaches of Kinzua Creek below Westline. These larger sections of the stream often have warmer water temperatures than the more narrow, shaded upstream reaches.

yellow creek

W A T E R S H E D

by Mark A. Nale



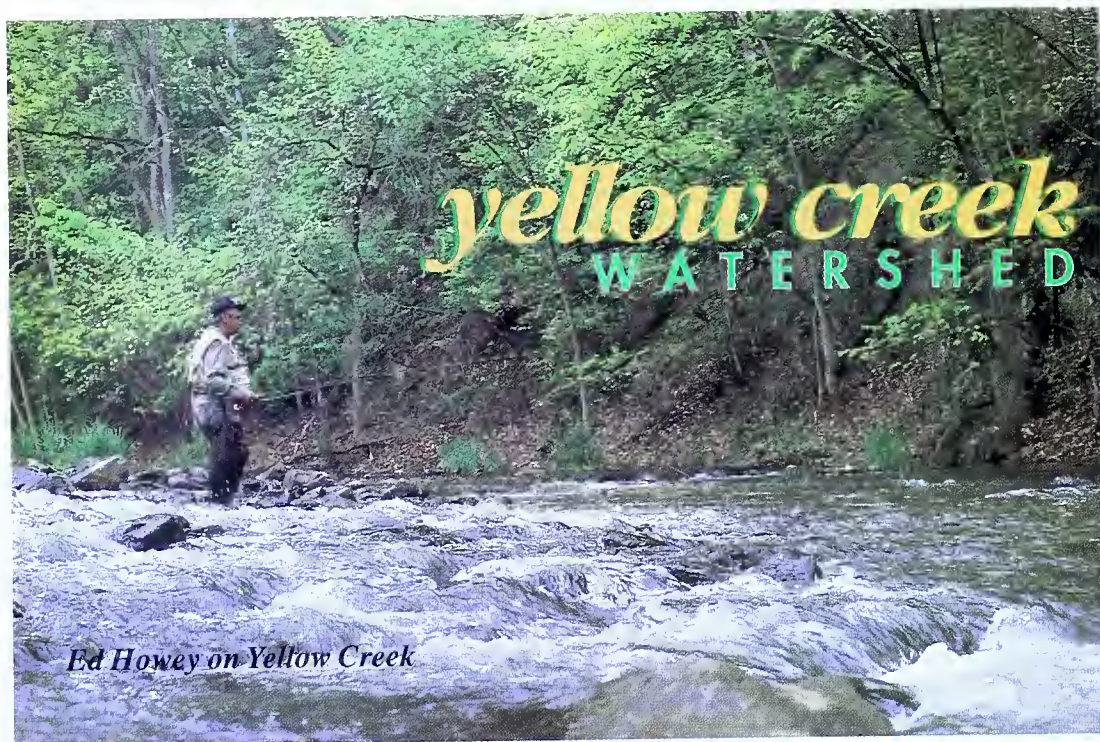
Hidden far away from the much publicized "big name" trout streams is Yellow Creek, a southcentral Pennsylvania treasure. This gem flows southeast from Woodbury to Hopewell, Bedford County, where it adds its limestone water to the Raystown Branch of the Juniata River. Aside from the main stream, four tributaries also offer good trout fishing and are certainly worth investigating: Maple Run, Beaver Creek, Three Springs Run and Potter Creek.

Locating Yellow Creek

Southcentral Pennsylvania's Yellow Creek, which should not be confused with Indiana County's Yellow Creek or Yellow Creek State Park, is located 25 minutes north of the Pennsylvania Turnpike in northern Bedford County. The village of Loysburg (on Route 36) lies near the center of the watershed. Routes 26 and 36 parallel Yellow Creek for its entire length. Anglers unfamiliar with the area will find it very "user friendly." All main and secondary roads are clearly marked. The map that accompanies this article should be your guide to the county's best fishing.

Big water

The mouth of Yellow Creek at Hopewell can be found at the junction of Routes 26 and 915. Hopewell can be reached by taking Route 26 south from Lake Raystown or north from Route 30 in Everett. This is the "big water" section



Ed Howey on Yellow Creek

of Yellow Creek, with widths up to 90 feet. Three secondary roads branch off of Route 26 and cross Yellow Creek during the first mile of our journey upstream. The first, Langdons Drive (T655), crosses Yellow Creek in an area where the flow is constricted to about 45 feet across. The stream has a nice gradient here, with excellent pocket water that fishes well with either wet flies or spinners. Ample parking is located near the silver metal bridge. This is the easiest place to park, and the water offers good fishing for stocked trout. Polecat Hollow Road (TR526) and SR1009, the other two roads to cross Yellow Creek, offer little parking.

The lowest stocking point is just above the Sunny Side Market, near Polecat Hollow Road. Much of the water in this lower mile is wide and shallow, with little cover except aquatic plants and vegetation that hangs in from the sides. Stocked trout disperse well in this area with adequate water levels, providing good fishing in April, but fickle summer water levels often result in fish vacating the area.

Although Route 26 continues to parallel the stream, SR1009 and SR1022, which follow and cross Yellow Creek several times, provide the best access for the next three miles. This is probably the nicest trout holding water on the lower reaches. Stream width varies from 40 to 90 feet, and the habitat is made more attractive with good cover and some deeper water. Most of the area is forested, and the stream is lined with black willows. With the stream swinging away from the road in several areas, an angler can find relative seclusion even during the early season. You'll find good parking on the

upstream side of SR1009's third bridge, as well as numerous pull-offs along SR1022.

Covered bridge

The historic Hall's Mill Covered Bridge is located some 3 1/2 miles above the mouth of Yellow Creek. This bridge, one of Bedford County's 14 covered bridges, was built in 1884 and has recently been refurbished. The newly painted red and white structure can be seen from SR1022 and driven across by taking St. Paul's Church Road (T539). Apart from the bridge's place in Pennsylvania history, a beautiful pool awaits any angler who stops to fish in this picturesque setting, and easy parking is located nearby.

Although conventional wisdom and my stream thermometer told me that all stocked trout would have long been gone from lower Yellow Creek, I saw a boy catch a 14-inch rainbow from the bridge pool on a 95-degree day in mid-August.

From the covered bridge upstream to Maple Run, a distance of about 1 1/2 miles, Yellow Creek takes on a narrower channel and averages about 45 feet in width. In addition to regular preseason and inseason stocking, preseason float stocking is done on the half-mile of stream below Maple Run. The float stocking efforts of Trout Unlimited and local fishermen such as Dan Feaster and Justin Claar improve the fishing in this area by spreading out the trout as well as the anglers.

Yellow Creek is crossed by Route 26 as well as four other secondary roads before it joins Maple Run. There is parking at some of the bridges, and several secondary roads have places where anglers can pull

off and park. It should be noted that littering has caused one landowner to post "No Trespassing" signs both upstream and downstream from the Yellow Creek Drive (T557) bridge. This landowner will still permit fishing to those anglers who politely ask. Please remember to respect landowner rights and don't litter. Almost all of the Yellow Creek watershed is on private land.

Special regulations

Yellow Creek's delayed-harvest, fly-fishing-only water (mouth of Maple Run to just below the New Frontier Restaurant) attracts fly anglers from all over the state. It's a frequent year-long haunt of members from several neighboring Trout Unlimited chapters. Regular *PA Angler* contributors Charlie Meck, Ed Howey and other fly anglers have also tried their luck on its beautiful and secluded limestone water.

Harry Guyer, Loysburg resident and outdoor columnist for the *Bedford Gazette*, has high praise for Yellow Creek's fly area. He sums up his feelings this way: "I've fished lots of famous fly areas and nothing compares. I can always pick up my fly rod and catch a few trout there."

Many nice trout, both stocked and wild, have been caught and released in the fly area. Guyer's personal best for 1995 was a 19 1/2-inch brown that he caught on a size 20 Griffith's Gnat. Harry thought that this monster was his ticket to the "20-20 Club" (a 20-inch trout caught on a size 20 fly) and even though he was tempted to get out the "fish stretcher," he knew that honesty was something that he could live with.

According to Guyer, most fly anglers return their trout, even between June 15 and Labor Day when they can legally harvest three trout per day. Catch-and-release fishing is a big boost to anyone's chances to land a big trout on Yellow Creek.

Besides the Griffith's Gnat, Guyer recommends the Black and Elk Hair Caddis (sizes 14 to 20) and the Adams as good dry fly patterns for the early season on the delayed-harvest area. Although Guyer fishes strictly dry flies, he noted that many trout are caught in the riffles on the Spruce Fly, and Pheasant Tail and Beadhead nymphs. Other important hatches on Yellow Creek include sulphurs, green drakes, and the blue quill.

Big trout in the gap

Immediately above the fly area, Yellow Creek narrows where it squeezes

through Tussey Mountain at the Loysburg Gap. The water here is deep in spots and travels with a surprising velocity as it shoots over and around the many huge boulders. Some locals refer to this area as the "Devil's Den" because of the barren rock fields that line both sides of the gap.

The gap area of Yellow Creek has ample parking and is by far the most heavily fished part of the stream, but secluded it is not. Busy Route 36 is never more than a few yards from the stream. Many anglers are willing to overlook the traffic noise for a chance to catch one of the large wild browns that live there.

The gap is heavily stocked by the Commission with browns and rainbows as well as brook trout raised by the Ravers Gap Sportsmen's Club.

Headwaters

Yellow Creek is a meadow limestone from Loysburg upstream to Woodbury. It is a good wild brown trout fishery in this area and is not stocked. Almost all of upper Yellow Creek is posted or leased by private fishing interests.

Potter Creek

Potter Creek, which crosses Route 36 and joins Yellow Creek at the village of Waterside, is Yellow Creek's highest quality tributary. Commission biologists found enough naturally reproduced brown trout to have Potter Creek removed from the stocking list and managed as a wild trout stream.

Although Potter Creek is nearly four miles long, it is still a small stream, even at its mouth. This is a true limestone with cress-lined sections as lush as anything on the Letort or Falling Spring. Despite flowing through several pastures and being degraded in some areas by cattle, Potter Creek is a high-quality fishery.

Dan Feaster, an excellent spin fisherman, fishes practically all of the Yellow Creek watershed and rates Potter Creek as his top stream. During one outing last year, Feaster landed and released 28 browns, several of which were in the 15-inch to 16-inch range. Besides wild browns, Feaster also catches limestone brookies in the headwaters of Potter Creek above the village of Maria. It's no wonder that he's excited about Potter Creek.

Potter Creek can be reached by turning onto Route 868 from Route 36 at Waterside. There are several small posted

areas on the stream, but the rest is still open to angling. Potter Creek is entirely on private land.



Three Springs Run

Three Springs Run looks much like a smaller sister to Potter Creek, having good quality limestone water. It flows through pastured farmland. Three Springs Run still flows over a picturesque limestone mill dam, creating a beautiful tumble pool that has yielded more than one nice brown to my family over the years. Although Three Springs has a wild brown trout population, surveys found their numbers to be less dense than in Potter.

About two miles of Three Springs Run is stocked by the Commission with rainbow and brook trout preseason and once inseason. Stocking begins at the first bridge on old Route 869 and extends upstream to New Enterprise. The Ravers Gap Sportsmen also stock brook trout in Three Springs. Route 869 follows the entire length of Three Springs with the old narrow Route 869 crossing it four times. Route 869 turns off of Route 36 just north of Loysburg.

Besides the fly patterns already suggested for Yellow Creek, both Three Springs and Potter Creek fish well with cress bug imitations. Bait and spinners also produce trout. Make long casts and fish upstream to be more successful.

Beaver Creek

Beaver Creek is the longest and most degraded of Yellow Creek's tributaries. It joins Yellow Creek at the Loysburg Campgrounds and its mouth marks the upper limits of Yellow Creek's stocking. Beaver Creek is stocked from its mouth upstream to Salemville, a distance of nearly five miles. The preseason and one inseason stocking provide good fishing in the early season, but Beaver Creek is usually poor after the end of May. Most early season anglers fish bait, but many of the same

Yellow Creek hatches occur on Beaver Creek.

Anglers can locate Beaver Creek by turning onto SR1005 at the 90-degree turn on Route 36 in Loysburg. SR1005 and then SR1026 follow and cross Beaver Creek, providing angler access at various sites.

Maple Run

Maple Run, the only non-limestone tributary to Yellow Creek, begins on State Game Lands 173 and flows south to join the main stream just below the fly area. Unlike the other three low-gradient meadow tributaries, Maple Run is a forested mountain stream. The lower two miles of this small freestoner receive preseason and one inseason stocking. Lower Maple Run also carries a fair population of naturally reproduced brook and brown trout, while the headwaters in State Game Lands 173, which are not stocked, have mostly small native brookies. Although some fine native brook trout fishing can be found on Maple Run, anglers should be aware that some rattlesnakes inhabit the upper watershed. Watch your step.

The easiest access to Maple Run is from the bridge on SR1024 or by parking along SR1024 and walking through the hemlock forest to the stream. The stocked water is below the bridge. A narrow dirt road turns off of SR1024 near the bridge and follows Maple Run up into the state game lands. This road has rough spots and is not easily traveled by most cars.



Fish It Now!

The various trout fishing opportunities offered by the Yellow Creek watershed make it a great place to visit in mid-April, but you don't have to wait for April to enjoy its bounty. Because of their limestone springs, Three Springs Run and Yellow Creek just below Loysburg are great places to visit on a warm January or February day. Besides the normal spring stockings, Yellow Creek is also stocked by the Commission in October as a part of their new fall stocking program. The delayed-harvest, fly-fishing-only section on Yellow Creek is open year-round and draws quite a crowd in March and early April when other area waters are closed. Why not investigate Bedford County's treasure—even now? —MAN.

BREAKER, BREAKER! ANGLERS and COLLECTORS



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GOING, GOING, GONE!

ICE FISHING at Laurel Lake

by Seth Cassell

Cumberland County's Laurel Lake will probably never be accused of being one of the top ice fishing destinations in the Commonwealth. Its water, which is fed by Mountain Creek, is infertile compared to other local lakes. Except for trout, Laurel Lake is not a place to go to limit out on a species or catch a lot of large fish. Perhaps by some anglers' standards, Laurel Lake does not have much to offer. But this impoundment has an ace in the hole—variety. Here anglers can catch trout, largemouth bass, bluegills, yellow perch, and even chain pickerel.

More accurate nomenclature for Laurel Lake would probably be "Laurel Pond," because this small impoundment is only 25 acres. Located just off the Appalachian Trail, it is situated in the picturesque Pine Grove Furnace State Park. Mountains rise from all sides of the impoundment, making it a scenic place to spend a day ice fishing.

Laurel Lake's fishery

Trout are undoubtedly the most abundant species at Laurel Lake, so they are the most popular. If anything, Laurel Lake is considered a "trout lake." The Fish and Boat Commission stocks trout here throughout the year, including fall, just before the water freezes.

The fishing, however, does not end with trout. Pickerel are also frequently caught, although you will not find the furious action that you would in Pocono-region lakes. Most pickerel in Laurel Lake are not much over the legal size of 15 inches, but larger ones certainly roam about. Each year, someone usually pulls out one of these toothy marauders that is over 22 inches. Just recently, an angler caught a pickerel that measured 23 3/4 inches and weighed 4 1/4 pounds.

Bluegills are abundant and can be caught in great numbers while ice fishing. Largemouth bass are present, but not in booming numbers. Most bass that are caught are small, 10 to 12 inches, but every once in a while a bigger one is caught. While fishing among the lily pads in summer, I spotted a lunker largemouth cruising the shallows. By my best estimate, it easily exceeded 22 to 23 inches.

Yellow perch are available in good numbers, and they often save the day when fishing is slow. However, they do not reach the large sizes that they do in nearby impoundments such as Lake Marburg.

glar tackle boxes. All colors produce, especially nickel and gold.

Jigs can also be productive on Laurel Lake. Good colors to use are yellow, orange, white and black. It sometimes helps to tip your jigs with maggots, wax worms or meal worms. Try both presentations and see which is working best at the time.

Do not hesitate to use live minnows with your ice rod. This allows you to readily change depths and give your minnow a little life. Try suspending it and giving it a few jerks now and then.

Be sure to use line no larger than 6-pound test, preferably 4-pound, when fishing for trout. Anything larger can turn a trout off.

Trout can be found throughout most of Laurel Lake when the ice is on, so don't be afraid to experiment with different spots. In general, it is best to avoid shallow areas.

Largemouth bass, pickerel

Laurel Lake pickerel and bass can be caught with the standard rig—a tip-up and a shiner. The main difference in ice fishing for the two species is location.

First, structure is the key when fishing for largemouths. Because Laurel Lake lacks an abundant amount of structure, anglers should head for the lake's channel. Running along the lake's western shore, the channel is not very deep, nor is it very wide, but it is definitely a good starting point when going for bass. Also, for the most part, bass like to seek out the deepest water during winter. Most times you will find them just off the bottom.

When specifically targeting Laurel Lake's lunker bass, try going by the old rule "big bait for big fish." This is also a good way to take some of the lake's larger pickerel. Shiners in sizes of 5 to 8 inches are appropriate for this type of fishing. Hook the shiners in the back at the dorsal fin, because this allows them to move in a more life-like fashion. Be careful not to place the hook too deeply into the shiner's back, because this will eventually kill it.

Because Laurel Lake has a limited population of lunker-sized largemouths, it is not a good idea to tie up all of your tip-ups with large shiners. It is more practical to set only one or two tip-ups with the large shiners in key locations, and then devote the rest to average-sized bass and pickerel.

Structure

During the warm months, about a quarter of Laurel Lake is covered with lily pads, where plenty of bass and pickerel reside. But this cover disappears when ice forms. After ice-up, rock shelves, submerged logs and stumps, and brush piles are the lake's primary structure. The lake's channel and small coves also offer hiding and ambush spots for fish.

Laurel Lake is a shallow waterway. In the lake's deepest section, it probably does not reach a depth of more than 15 feet. The lake's channel, for most of its length, is approximately 5 to 6 feet deep. In some places, Laurel Lake's water can be measured in inches.

Trout

As mentioned earlier, trout are the most abundant species at Laurel Lake and the most sought-after ice fishing species. It can be difficult at times to pinpoint the depth that trout are holding. Therefore, much experimentation in bait and lure placement is needed to be successful. Tip-ups are often used for trout with shiners that are 2 to 3 inches long. Worms, cheese, marshmallows and other traditional baits work. Most Laurel Lake anglers, however, reserve most of their tip-ups for largemouths and pickerel.

Using an ice rod is the most productive way of taking trout under the ice. This allows you to work your lure at different depths and actions, because trout can sometimes take a little coaxing before they strike. Jigging spoons are probably the most popular lure for taking trout at Laurel Lake. A productive spoon to use is a 1/10-ounce or 1/4-ounce Swedish Pimple, which is a standard lure in most ice an-

ICE FISHING at Laurel Lake

Ice-fishing for pickerel does not vary much from bass, at least as far as lures and baits are concerned. But what differs is location. Look for pickerel toward the head of the lake where the water is shallow, only 2 to 3 feet deep. Concentrate your efforts near structure. If this does not produce, try the mouths of the two channels that flow into Laurel Lake from Mountain Creek. Pickerel tend to congregate in these types of locations.

Bluegills, yellow perch

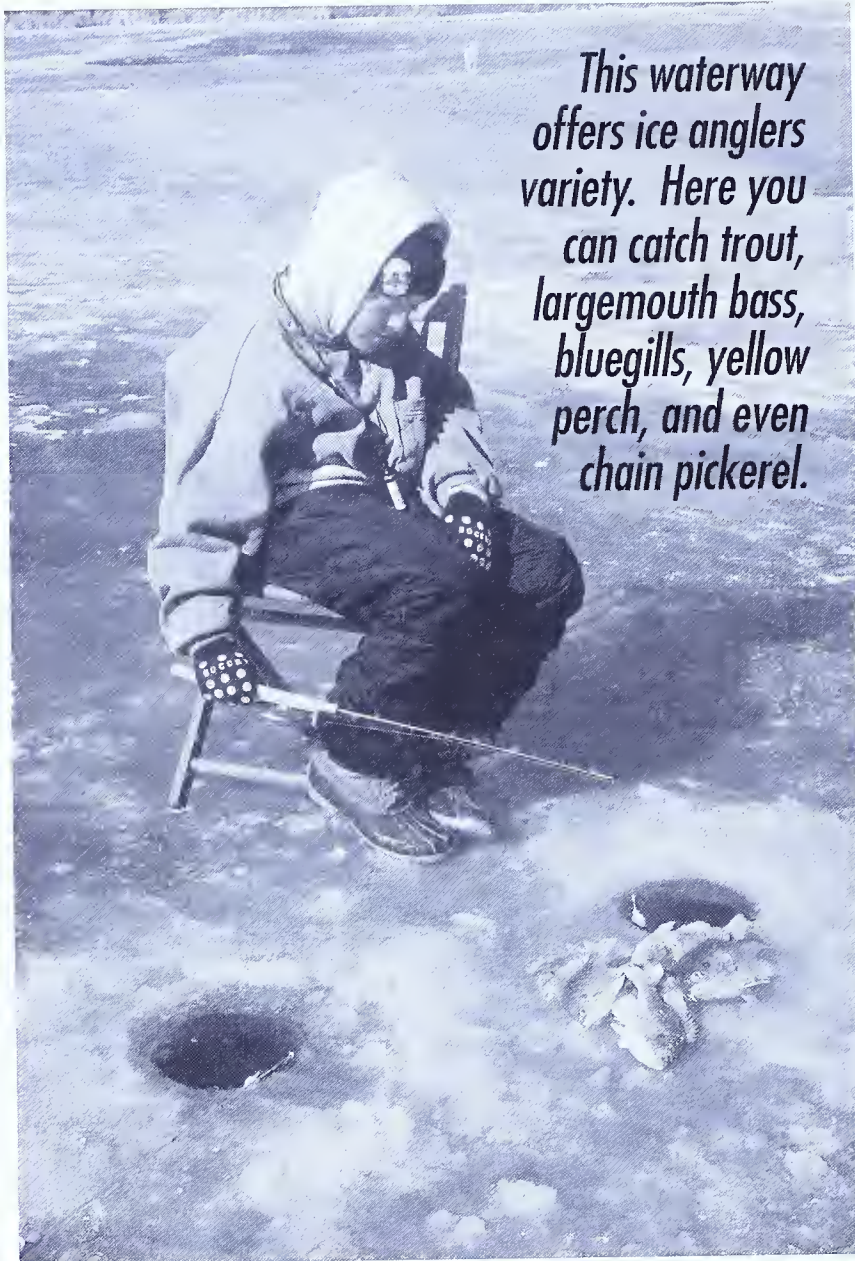
Average-sized bluegills can be caught in good numbers during winter. Look for them near structure—in and along the channel, rock shelves, small coves and at the channel mouths. These sheltered areas offer them protection from hungry predators. Although these are good starting points, bluegills can be found just about anywhere.

Jigging is the most effective way to catch bluegills under the ice. A great combination is a small teardrop jig tipped with a maggot or meal worm. You can also get away with using small shad darts. Plain live bait rigs with wax worms, meal worms and small minnows can also be productive. Be sure to use small hooks no larger than size 8. Do not use any line greater than 2- or 4-pound test, because bluegills can be line-shy at times.

Yellow perch can generally be found roaming the deep water in schools. A good area for perch on Laurel Lake is in the “deep” water on the boat launch side of the swimming area.

For perch, you can use the same

This waterway offers ice anglers variety. Here you can catch trout, largemouth bass, bluegills, yellow perch, and even chain pickerel.



baits and lures as you would for bluegills. Perch, however, may be more apt to take small minnows and are less concerned with line diameter.

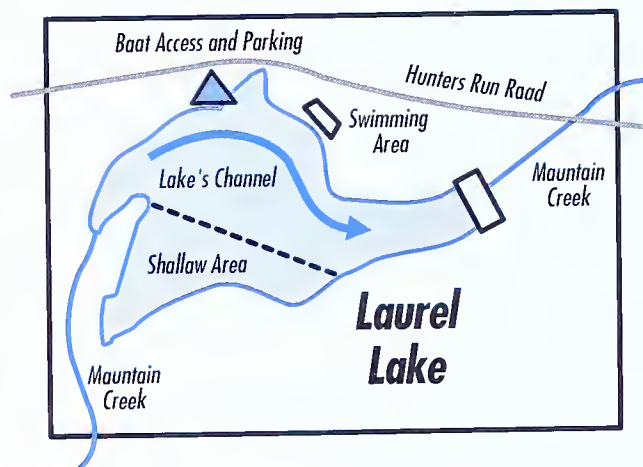
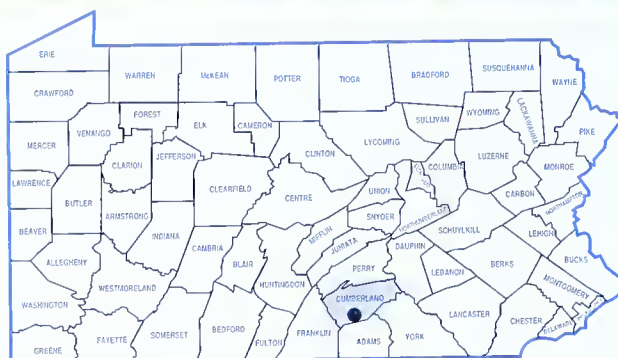
Successful ice fishing requires an intimate knowledge of a lake's structure and habitat. So it is always helpful to take a scouting trip before the water freezes. Take a small boat or canoe, and paddle around Laurel Lake and see for yourself where potential hotspots are located. Because Laurel Lake is small, it is not too difficult to narrow down some of the best ice fishing spots. You might be pleasantly surprised how much this helps your success when it is ice fishing time.

Late-winter fishing

For the second year, Laurel Lake will be a part of the Fish and Boat Commission's new late-winter stocking program. Under this program, trout are stocked sometime in late February, and fishing is permitted throughout the entire month of March. Ice-fishing and boat fishing are prohibited during this time.

Anglers may fish only from the shore.

Minnows, garden worms, wax worms and meal worms are standard baits during this time. Small spoons are a very productive lure because their action is slower and they are easy to work close to the bottom. Spinners are also a good choice if they are worked deeply and slowly.



Access

Laurel Lake can be reached from Route 34. Just below Mount Holly Springs, turn onto Hunters Run Road (SR 3008). This road leads through a wooded area toward Pine Grove State Forest. Once in the park, anglers will see the dam, lake and access area off to the left.

Before venturing to Laurel Lake, it is a good idea to call the park office to ascertain the lake's ice conditions. That number is (717) 486-7174.

ANGLER



E&I Volunteer Corps member Ralph Gambler helps a youngster learn to cast. Other activities for kids included making fish prints on T-shirts.

DAY on the RIVER

October 7, 1995

Scott Park, Easton

The Commission marked 125 years of managing bass in Pennsylvania with a "Day on the River" celebration on the Delaware in Easton. Highlighting the event was a re-creation of the original stocking with a horse-drawn wagon (right) escorted through the town to the river. Below, fish were stocked as they were 125 years ago.



At right, Commission Area 5 Fisheries Manager Dave Arnold exhibited electrofishing equipment. Other demonstrations included filleting and cooking fish, fly-tying and lure-making.



Boating and water safety exhibits also marked the occasion. In addition to the Fish and Boat Commission, participating organizations included B.A.S.S., the Canal Museum, Delaware River Shad Fishermen's Association, Forks of the Delaware Shad Tournament, Northampton County Federation of Sportsmen's Clubs, PA Department of Conservation and Natural Resources, PA National Guard, Trout Unlimited, and the U.S. Coast Guard Auxiliary.

Penn State Conservation Leadership School

Instead of desks and blackboards, the classrooms at Penn State's Conservation Leadership School this summer will include an underground cave, canoes and sailboats on a 72-acre lake and green leaves and shade on 700 acres of forested land.

In this unique setting at the University's Stone Valley Recreation Area near State College, secondary students between the ages of 15 and 18 will learn about conservation during two-week programs that emphasize field-based, hands-on learning, group problem solving and environmental management planning.

The curriculum involves active participation in environmental management, resource assessment, and regenerative conservation methods. Topics include watershed management, citizen action, basic ecology, land-use planning, alternative energy supplies, environmental risk assessment and forest management.

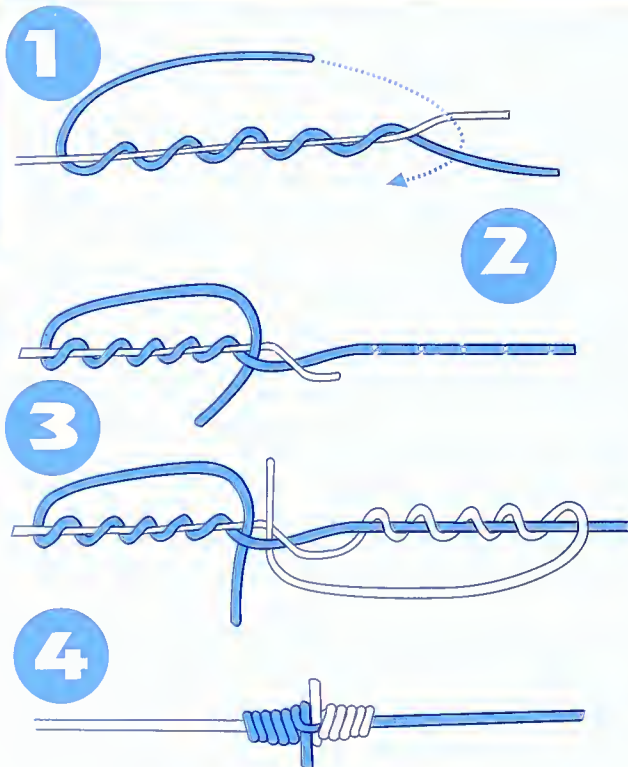
Students provide their own transportation to the Stone Valley Recreation Area, where they will stay in four-person platform tents with cots, heated shower and restroom facilities, complete meal service and all educational needs. The \$440 tuition (\$495

for non-Pennsylvania residents) covers tuition and all other costs for the student's two-week stay.

The 1996 Conservation Leadership Schools dates are: Session I, June 30-July 13; Session II, July 14-27; and Advanced Session, August 1-10. Please note: The Advanced Session is open only to students who previously attended a regular session.

To register by phone or for more information, call 1-800-PSU-TODAY (1-800-778-8632), or visit <http://www.cde.psu.edu/C&I/ConservationLS.html> to see our WWW page.

Angler's Notebook *by Seth Cassell*



Blood knots, although difficult to tie, are a terrific way to connect two pieces of monofilament. They lose their effectiveness, however, when the two pieces differ in diameter. When you want to join two pieces of different size, use a surgeon's knot, which is basically an overhand knot wrapped around three or four times. It is a strong knot and it works well.

It is always a good idea to carry a wading staff when wading in cold and turbid water. It can help immensely in keeping your balance, and it lets you probe ahead for deep holes or large boulders. An old broomstick makes a great wading staff, provided that it is about chest-high. Drill a hole through the top and tie a lanyard on it before heading to the water.

Although catch-and-release fishing is a great conservation practice, there is still nothing wrong with keeping some of the day's catch for the dinner table. Many anglers like to keep their fish alive until the fishing day is over by using a stringer. Don't slip the stringer through the fish's gills, because this may cause the fish to die prematurely. Instead, thread the stringer through the thin membrane behind the fish's jaw. This keeps your catch "fresh" until it is dinner time.

Hooks can easily dull while fishing. If you allow your hooks to go unsharpened, you increase your chances of missing strikes. Therefore, always be sure to check your hooks for sharpness. There are many pocket sharpeners on the market that anglers can easily use to keep their hooks sharp. You'll find that you won't lose as many fish if you use one.

Winter trout fishing can be great in Pennsylvania's bountiful limestone spring creeks. Because these streams receive their water from underground springs, their water remains relatively constant year-round. Near the springs, water temperature holds at about 52 degrees. During winter, fish during afternoons and on sunny days, when trout seem to be most active. Fly fishermen may even be afforded the opportunity to catch trout on the surface, so be sure to bring plenty of small dry flies.

During cold weather, fish do not like to expend much energy to take a lure. Spinners are popular lures, but they may not be appropriate during this time. Instead, try using spoons. These lures tend to move slower in the water and are easier to work close to the bottom. It can be difficult to do this with spinners.

illustration: Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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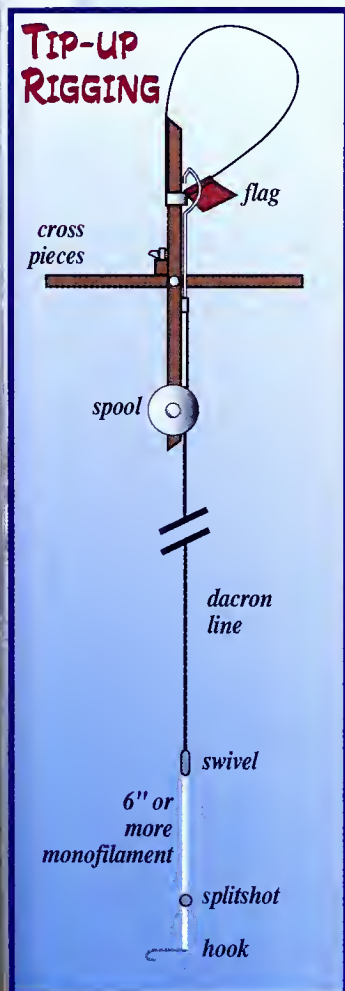
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SMART

Angler's Notebook

by Carl Richardson

Tips on Tip-Ups



A tip-up is a nifty little ice fishing tool that does it all. The tip-up keeps the bait at one depth, signals when the bait is taken and holds the line. If you have never fished with a tip-up, here are a few tips.

RIGGING

Anglers often make the mistake of spooling their tip-ups with regular fishing line. Monofilament line has a lot of memory. Wound tightly on the tiny tip-up spool, the line will come off looking like a spring. The best line is braided Dacron, or other line made for tip-ups. This line is also easier to hold and retrieve. This is important because you pull the fish in with your hands. Make sure you wind the line on the spool so it trips the flag.

Tied between the hook and the end of the tip-up line is a leader of monofilament.

This can be attached directly to the line or tied to a swivel. If you are fishing for pike, muskies or pickerel, this leader should be heavy mono or even wire. Tie on a hook and you are ready to fish.

FISHING

Find the bottom using a sinker clipped to the hook or the line. Lower the weight to the bottom (the line goes limp) and mark where the line enters the water. You can do this by tying an overhand



knot in the line. Pull the weight back up to the surface and bait up.

Lower the bait to the bottom (the mark is at the waterline) and raise it about a foot or so. Experiment with the bait at different depths. To keep the minnow at the right depth, you need to use a splitshot or two.

Important tip: You can change how much your bait can swim around by adjusting the weight. A light weight lets a baitfish swim freely. A heavier weight restricts it. The distance from the splitshot to the hook also affects how far the fish can swim. The closer the splitshot is to the bait, the less it can swim.

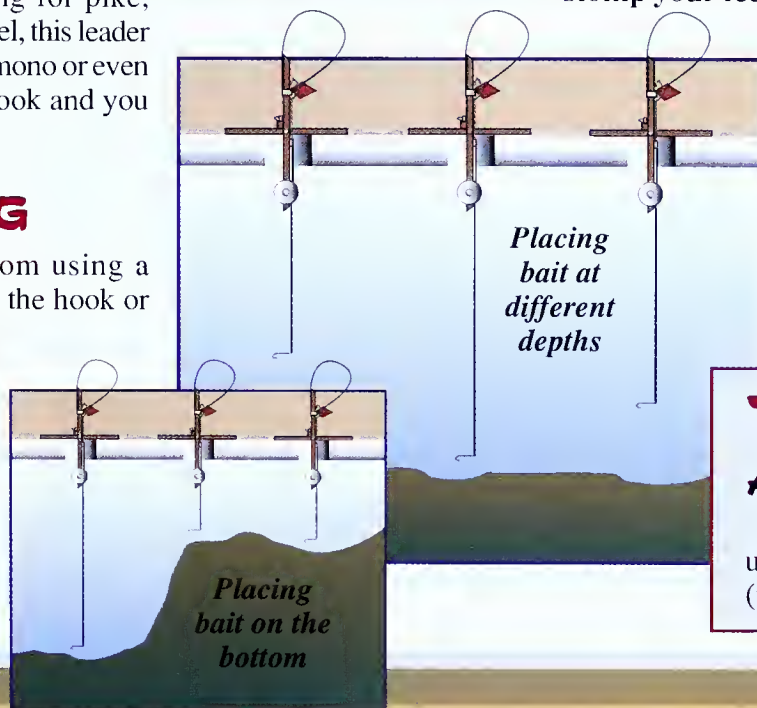
Set up a string of tip-ups with baits set at different depths or at several locations to locate fish. Once the fish are located, all the tip-ups can be set at that depth or location. This is a great trick for finding schooling fish like yellow perch.

Tip-ups also work great on fish that are on the move, like the big predators. Pike, muskies, bass and trout cruise looking for a meal. A minnow frantically swimming below your tip-up makes an attractive meal.

Tip-ups are only effective when baited with live or dead bait. Live bait moves, wiggles, swims or flashes, attracting fish. Fish are attracted by the smell of cut or dead bait.

FLAGS!

As the fish takes the bait, it pulls line off the spool, which trips the flag. Move quickly to the tip-up, **but don't run or stomp your feet.** This can spook fish, because the vibrations move from the ice into the water. Pull the tip-up out of the hole and hold the line in your hands. Gently pull the line until you feel the fish. If the fish is there, give a strong tug to set the hook. Now you have your hands full—you must pull the fish in with your hands. Make sure the line you have pulled up is not tangled around you or the tip-up. That way if the fish makes a run you can give it line easily.



TIP-UPS AND THE LAW

You are permitted a maximum of five tip-ups, or any combination of five tip-ups and rods (with a maximum of two rods).



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SPECIAL INSERT
Fish Restoration and Passage
on the Susquehanna River



Straight Talk

Pennsylvania Fishing and Boating Map

Last fall, the Fish and Boat Commission initiated a project to provide the angling and boating public with a map showing information on boat access and special-regulation fishing areas. Maps are very popular with anglers and boaters, and the Commission has received many requests for new maps since the last edition of the roadmap went out of print several years ago.

The new color roadmap shows public boating access areas, lakes, special-regulation fishing areas, Commission fish culture stations and regional offices, and other information that may interest anglers and boaters. The back of the map has information about each access area and special-regulation area identified on the front. For access areas, a table on the back of the map shows the county where it is located, the access name, the waterway, the owner, and additional information about parking, launch ramps and horsepower. Special-regulation information includes the county, waterway name, regulation type, and the nearest town.

The map was developed by a team of Commission personnel. The Commission's waterways conservation officers were the primary source of information on the access areas. Bureau of Fisheries personnel provided the specifics on the special-regulation areas. I would like to express a public thank-you to the Cartographic Information Division of the Pennsylvania Department of Transportation, which provided the cartographic and technical support for this project. Without their enthusiastic assistance, production of this map would not have been possible.

It was interesting to find that about 30 percent of the identified boating accesses are owned by the Fish and Boat Commission, 24 percent are owned by the Department of Conservation and Natural Resources (DCNR), 20 percent are owned by local governments, and 13 percent are owned by public utilities or private individuals or entities.

These statistics reveal that providing waterway access is a cooperative venture. The Commission will continue to strive to build and maintain partnerships with other access providers. In a climate of fiscal frugality, and with an eye to giving our customers the most for their money, we make every effort to reap the greatest benefits for our access program dollar.

Production of the *Pennsylvania Fishing and Boating Map* was a true team effort. The Fish and Boat Commission staff, in cooperation with the Department of Transportation, designed the map. The Fish and Boat Commission will pick up the cost for printing the first 50,000 copies of the map. The Pennsylvania General Assembly will print and distribute an additional 250,000 copies. Through this partnership effort, we will make 300,000 copies of this important information available to Pennsylvania's anglers and boaters at minimum cost to the Fish Fund and Boat Fund.

As part of a second phase of this project, planned for 1996-97, the Commission will update the Commission's book, *Guide to Public Fishing and Boating Access*, and produce a series of regional and county maps. These maps may be printed in *Pennsylvania Angler* as we did in 1983 and 1984 with our tremendously popular *Trout Fishing in Pennsylvania* and *Warmwater Fishing in Pennsylvania* special publications.

I hope you find this map helpful and use it as a tool to experience Pennsylvania's first-class aquatic resources. The map is available at no cost at Fish and Boat Commission offices, and we will distribute single copies at various sportsmen's shows and functions. Copies of the map are also available by mail. To obtain a copy of the map by mail, contact: Publications Section, PA Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000. Please include \$1 per map for postage and handling.



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PA GOVERNMENT PUBLICATIONS

Wintertime on the Three Rivers by Darl Black.....4

Trout Fishing in Sinnemahoning State Park by Mark A. Nale.....7

There's a Very Large Trout in Birch Pool by Jim Bashline.....11

On the Water with Robert L. Petri.....15

Calling All Clubs!.....16

Trout Fishing in Sullivan County by Robert L. Petri.....17

PA Fish and Boat Commission Publications List.....21

Hawk Mountain: Fishing the Flight Path by Vic Attardo.....24

SMART Angler's Notebook by Carl Richardson.....31

The cover

This month's cover shows Mark A. Nale with a 20 1/4-inch brown trout caught on Centre County's Spring Creek at Milesburg. Photo by Frank R. Nale.

Tagging stripers

Commission Area 6 Fisheries Manager Mike Kaufmann mentioned some remarkable information gleaned from tagging spawning striped bass in the Philadelphia vicinity of the Delaware Estuary in 1995. "We tagged a total of 161 striped bass, and we have received recapture data from 21 of those fish," Kaufmann said. "Tagged stripers were re-caught within 17 days of tagging by anglers in Chesapeake Bay, on the Delaware state coast, off New Jersey, and as far away as Massachusetts."

The tag Kaufmann and his crew used was an anchor tag—a thin 3-inch piece of hollow, spaghetti-like plastic that was attached beneath the fish's skin near the pectoral fin. The tag included the address of the Annapolis, Maryland office of the U.S. Fish & Wildlife Service, which is gathering the data in this continuing multi-year study.

"The tagging shows nothing conclusive, but consider the return of 21 tags from this sample of 161 tagged fish, a return of 13 percent," Kaufmann said. "You get an idea of the tremendous amount of fishing pressure on these fish and other gamefish. The sheer numbers of anglers, and their increased fishing know-how and electronic equipment, mean that wherever these fish swim, anglers will be there to catch them."

Kaufmann also pointed out that only six of the 21 returned fish were creel. The others were caught and released. Imagine the effect on this resource if anglers and agencies didn't cooperate to promote catch-and-release fishing, compliance with high size limits, and similar conservation-oriented behavior.

Spawning stock assessment and tagging will continue in 1996.—Art Michaels.

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WINTERTIME

on the Three Rivers

by Darl Black

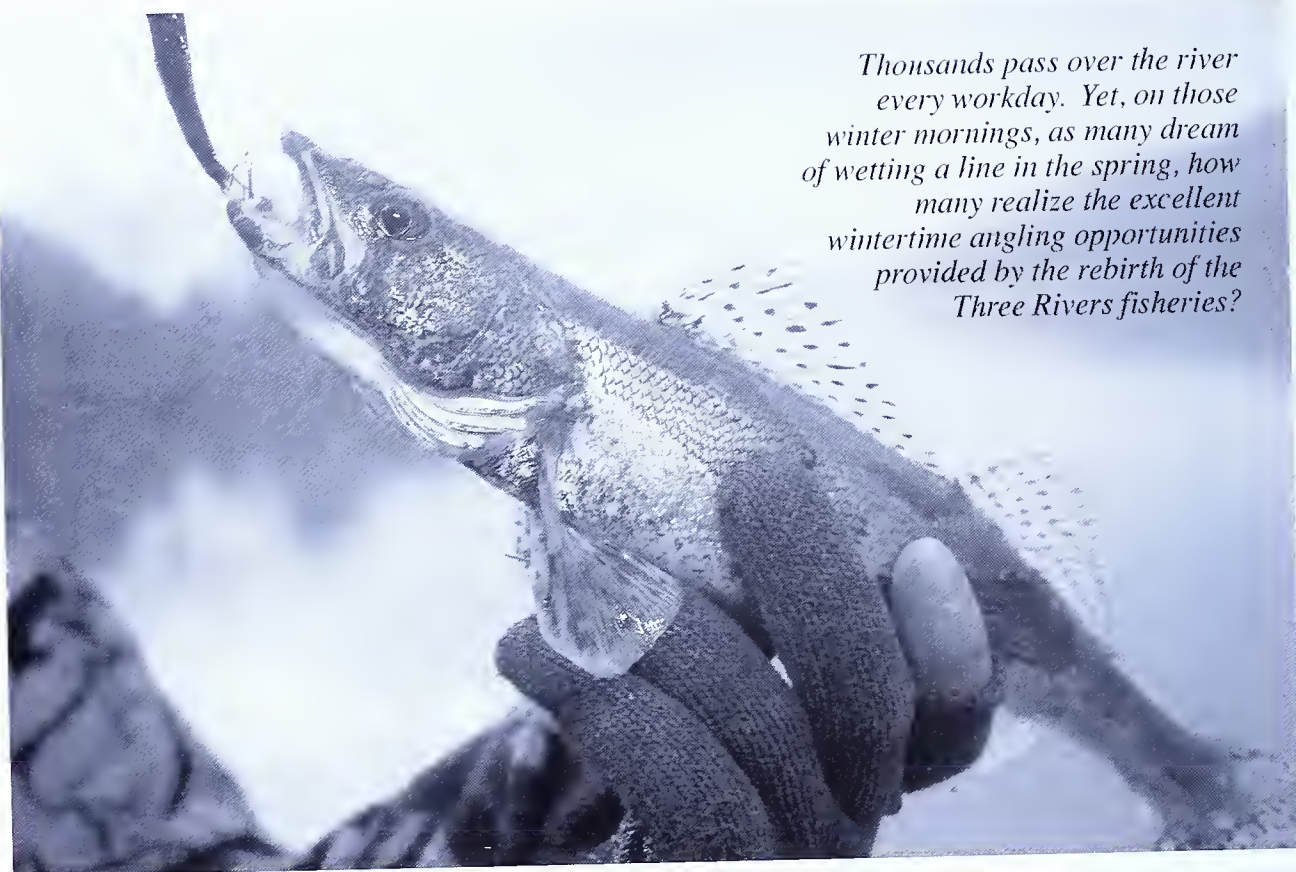


photo-Darl Black

Thousands pass over the river every workday. Yet, on those winter mornings, as many dream of wetting a line in the spring, how many realize the excellent wintertime angling opportunities provided by the rebirth of the Three Rivers fisheries?

"There's a walleye looking at my jig," whispered Jeff Knapp, as if a fish could possibly hear our conversation. I quickly glanced at his rod tip, but could see no movement that would indicate a bite. So I bit. "How can you tell?"

"The minnow's nervous; I feel it," Jeff said. He held the line coming from his spinning reel lightly between his forefinger and thumb.

Within seconds his rod tip bobbed slightly, and Knapp responded with a straight-up hookset. The fish wasn't large enough to pull the drag, but it certainly was energetic in the 32-degree water, attempting several runs before Knapp finally brought it to the side of the boat.

Knapp lifted the fish with his rod, grabbed the sub-legal walleye, unhooked it and quickly returned it to the river. That walleye made our 17th fish in a little over three hours. The count included eight walleyes, five saugers, three crappies, and a musky that Jeff had to the side of the boat before the fish broke his line.

"It's not a great day on the river, but not bad for February," Knapp said. "It gives you an idea of what's here, and it sure beats ice fishing!"

Winter alternative

When the blustery, cold days of winter arrive, most anglers

hang up their fishing gear until spring. A few take to the ice to sit around small holes with a cup of hot chocolate in hand. Maybe you believe these are the only options. But depending on the severity of the winter, open water is likely available on several of Pennsylvania's largest rivers.

In the southwest section of the state, the Allegheny and Monongahela join to form the Ohio. This area, known as the "Three Rivers," is the heart of Pennsylvania's second largest population center. Thousands pass over the river every workday. Yet, on those winter mornings, as many dream of wetting a line in the spring, how many realize the excellent wintertime angling opportunities provided by the rebirth of the Three Rivers fisheries?

"Compared to 20 years ago, the improvement in water quality is remarkable, so most fish populations continue to expand in all three rivers," says Rick Lorsen, Commission Area 8 Fisheries Manager. "In terms of a wintertime fishery, the main species are walleyes and saugers, but don't overlook white bass or even muskies. And I've been trying to establish hybrid stripers on pools of the Mon and Ohio."

Knapp, a former river guide, agrees with Lorsen's top picks for winter fishing on the navigational pools of Three Rivers. But he also points to additional wintertime species.

photos: Dan Black

"Crappies are fairly common in the Allegheny if you know where to look," Knapp says. "Also, during warming trends the smallmouths in the Ohio turn on. And don't forget the perch. The Allegheny has some nice yellow perch that are very active in the cold water."

Walleyes, saugers

"Even though the walleye population is strong throughout the navigational pools of all three rivers, saugers actually dominate the walleyes in terms of sheer numbers," Lorsen says. "The best sauger fishing is in the Mon, which is more characteristic of their preferred habitat. Next is the Ohio and finally the Allegheny. For walleyes, the opposite is true. The best river is the Allegheny, followed by the Ohio and the Mon."

The sauger, as most fishermen know, is a close relative of the walleye. However, the sauger is smaller and more tolerant of turbid water than the walleye. With a 12-inch



minimum size for saugers and 15 inches for walleyes, it is important to tell the difference between the two. Saugers have dark blotches across the back that drop partially down each side, and a dark spot at the base of the pectoral fin.

The Three Rivers walleyes and saugers are self-sustaining populations, with no stocking for either species. According to Lorsen, there are some ups and downs in the populations depending on the success of the prevailing year class. This February, a strong 1993 year class will be reaching minimum size. Coupled with some remaining fish from a strong 1991 year class, there should be good fishing for legal-size saugers and walleyes, along with some larger fish.

The number one presentation for both saugers and walleyes is a jig-and-min-

now. Jigging spoons and bladebaits hold second place.

Knapp prefers a plain Northland Fireball jig tipped with a fathead minnow rigged on a stinger hook, and fished on a 6-foot medium-power spinning rod with 6-pound line. The Fireball is a short-shank jig intended for live bait. Knapp finds the stinger hook a necessity in the cold water to prevent saugers and perch from stripping minnows without being hooked.

When the walleye and sauger bite is slow, using a small piece of attractant-impregnated worm on the hook shank, in addition to the minnow, has proven effective.

Knapp targets main river eddies and dredge holes with vertical presentations. Fishing straight down allows for better control of the jig in the river current and reduces snagging.

"Current is important for walleyes and saugers. There must be water movement through the hole, but there is a balancing act. The fish position themselves at a precise site where the strong current is broken or deflected. You will not find walleyes and saugers in dead slack water, nor will you find them in rushing whitewater during the winter. Very often the same areas tend to hold saugers, walleyes and yellow perch, but there is a hierarchy of species. The small walleyes are always deeper than the sauger. The biggest walleyes are always the shallowest.

"Here's an example. Say you are fishing a hole that goes to at least 30 feet deep. Small walleyes set up at 25 feet. A sauger school may be at 15 to 20 feet, and at the downstream lip of the hole in 8 to 10 feet of water is the best spot for a big walleye."



map graphics: Ted Walker

WINTERTIME

on the Three Rivers

Nick Mellon, one of only two USCG licensed guides on the river, has developed a strong wintertime clientele interested in walleyes. He prefers to fish the area immediately downstream of a lowhead dam. On a good day Mellon and clients may catch 50 walleyes and saugers.

"I use a 1/4-ounce jighead with a stinger hook and a chartreuse or white grub, and tip it with a fathead minnow," Mellon says. "That's my most consistent producer in the winter. I use 6-pound-test line and a 9 1/2-foot steelhead rod. I fish vertically, using my electric motor to match the speed of the downstream current so I can remain in place."

Even though the main river holes are hot during the day, the bars at creek mouths can be magnets for walleyes in the evenings. These spots offer the bank fisherman the best chance at walleyes. Bank fishermen also benefit from periods of high water, which force walleyes from the heavy main river flow to newly formed shoreline eddies.

White bass

According to Knapp, some winters it is possible to catch a lot of white bass in the Ohio River. It all depends on recent white bass hatches and the baitfish situation.

White bass are a panfish-size cousin of the striper. They travel in large schools and feed voraciously on baitfish. White bass provide exciting surface fishing during the spring and fall, but they are taken on sub-surface presentations during the winter.

"This past spring did not seem a good one for catching white bass based on angler reports, but there still should be good numbers from the 1993 and 1994 year classes," Lorsen says. "Those '93 fish should be in the 12- to 14-inch range this winter, which can provide some very nice specimens. It appears the 1995 white bass reproduction was not as high as I expected it to be. There must have been some high water during May right at spawn time that did not allow for a good hatch."

Ernie Pate, a river smallmouth fanatic, finds that white bass fill the void when other species are less inclined to take an artificial lure in the cold water.

"I catch a lot of them on grubs or tube jigs when looking for smallmouths," Pate says. "But in the cold water it's tough to beat a flashy jigging spoon for white bass."

"When you run the river and see balls of baitfish on the sonar in the main channel with some larger fish hanging below them, you can make an educated guess the bigger fish are white bass. Just drop something white or silver down to them and see if they will hit. If they aren't feeding at that moment, you can expect something to happen in short order," Pate says.

Knapp catches most wintertime white bass on a jig-and-minnow or bladebait while walleye fishing in the eddies. When deliberately fishing for white bass in the winter, he targets current breaks in 15 to 20 feet of water around docks and pilings.

"There are fewer white bass on the Allegheny, but they tend to run larger," says Knapp. "On the Ohio, 8 to 12 inches seems to be the norm. Some years there are so many they are a nuisance. During those nuisance years, I have been told by a WCO that anglers at the mouth of the Beaver River catch them on a bare gold hook."

Muskies

"The Fish and Boat Commission manages for purebred and tiger muskies in 40 miles of the Allegheny, the Mon, and Pool

3 of the Ohio through supplemental stocking," Lorsen says. "After a survey of habitat and water quality in 1991, I felt portions of the riv-

ers could provide a musky fishery. We opted to go with both tigers and purebred muskies to get the numbers in there. It's too soon to know which is doing better, since I have not sampled them since the stocking. However, I hear reports that numbers of muskies are being caught."

Knapp is one of those anglers who Lorsen hears from regarding Three Rivers muskies. "There has always been a population of muskies in the lower Allegheny," Knapp says. "In years of high, stable water, there is a strong probability of catching muskies in the slack backwater sections behind or between islands all winter. When I was fishing every weekend a few years back, I averaged one musky every other trip between November and March—and those were incidental catches."

One fisherman who Knapp knows specifically targets wintertime muskies. This angler enjoys great success with a particular pattern. He fishes the mouths of creeks on bright, sunny days with an 8-inch reaper jig.

Crappies, stripers, smallmouths

Knapp advises anglers interested in crappies to target the deeper, slower holes of back channels and slack-water sites. "Rarely do you find walleyes and crappies in the same area during the winter," Knapp says. "For crappies, you need minimum current. And be prepared to fish deep—at least 15 to 25 feet and sometimes to 35 feet. A jig-and-minnow, smaller than what I use for walleyes, is my standard presentation for crappies."

Anglers may encounter hybrid stripers (also called "wipers" or "sunshine bass"—a hatchery cross between striped bass and white bass) in the Three Rivers. Lorsen has stocked hybrids in the past when fingerlings were available. However, the problem is the lack of a consistent source of hybrids. Since these fish cannot spawn, annual stockings are required to maintain a fishery. Pennsylvania walleye fry are swapped for hybrids from southern states, although the other states do not always have a surplus of hybrids to trade.

"I want to work with hybrids on two pools of the Mon where there are warmwater power plant discharges, and in the Ohio," Lorsen says. "When fish are available, I plan to stock them at eight per acre, which is a rate that has shown results in other parts of the Ohio River."

Knapp suggests that one more species be included in the wintertime mix—smallmouth bass. It's not a species anglers generally consider catchable in the extremely cold water.

"The first time I fished the Ohio in February, my partner and I caught five big smallmouths, all in the 18-inch range. The water temperature was 36 to 38 degrees, and the bass came from the same type of eddies I fish for walleyes."

Since that first time, Knapp has encountered wintertime smallies several times on the Ohio. They are typically in shoreline eddies in 15 to 20 feet of water. Some of his best spots have been eddies right in front of loading docks. These bass were taken on Knapp's favorite winter lure, a jig-and-minnow.

The lower Allegheny, lower Mon and Ohio do not offer the aesthetically pleasing scenery of a wild, rural river. But the urban/industrial shoreline creates its own ambiance. Fishing the Three Rivers is an enlightening experience because it lets everyone know there is hope here for degraded rivers when environmental standards are established and enforced.

ANGLER

Trout Fishing in Sinnemahoning State Park

by Mark A. Nale

Pennsylvania's north country and Sinnemahoning State Park still hold a special mystique for me. The trees are taller, more hunting camps have sprung up, but very little has really changed in three decades. Good trout fishing still abounds.



photo location:
First Fork Sinnemahoning near
the mouth of Bailey Run



The trout streams of northcentral Pennsylvania's Sinnemahoning State Park offer a wealth of opportunities for any angler. The streams, both big and small, as well as their trout, supply me with many memories.

I was lucky enough to grow up in a family with a father who loved the outdoors and a mother who supported our enjoyment. One of Dad's favorite destinations was "Potter County," which became a generic term referring to all of northcentral Pennsylvania. We, the two oldest sons, eagerly anticipated our annual five-day trips with him. Although our trout fishing excursions took us to many streams in several northcentral counties, as a teenager my favorites were always the streams in and near Sinnemahoning State Park. This area provided variety and adventure for me and my younger brother John.

At daybreak we'd be drifting red worms for native brookies on Bailey, Brooks or Lick Island runs. Later in the day we'd try spinners or worms on the bigger water of the First Fork. We'd even explore tiny trickles such as Norcross, Berge and Muley runs, all of which yielded trout. If we wanted real adventure, we'd hike in to fish the less accessible Lushbaugh

Run. At this point (before my father accuses me of memory loss or distortion of reality), I must admit that we'd sometimes miss the crack of dawn. You see, my brother John and I loved our sleeping bags. On some mornings, at daybreak we'd still be wrapped in their cocoon-like warmth. Then it would take the smell of bacon and eggs, a warm cup of tea, and coaxing from my Dad to get us out of the sack. I'll always remember him saying, "Get up, boys, the trout are calling!"

Now, some 30 years later, Pennsylvania's north country and Sinnemahoning State Park still hold a special mystique for me. The trees are taller, more hunting camps have sprung up, but very little has really changed in three decades. Good trout fishing still abounds. The trout streams in and around Sinnemahoning State Park would make a great early season destination. Let me introduce you to the area's offerings.

The park

Sinnemahoning State Park, which opened in 1958, straddles the Cameron-Potter County line. It is located eight miles north from the village of Sinnemahoning on PA Route 872, or 35 miles south from

Route 872's junction with Route 6 near Coudersport.

This 1,910-acre park is surrounded by the beautiful Elk State Forest. The First Fork of Sinnemahoning Creek flows through the park and is detained by the George B. Stevenson Dam, which is the park's centerpiece. The pool of this flood control dam provides great fishing for stocked trout as well as bass, panfish, pickerel, catfish and tiger muskellunge. The best fishing is had from small non-powered or electric powered boats. The area around the dam abounds with deer, black bear and wild turkey. It is also regularly visited by bald eagles. But let's get to the trout.

First Fork of the Sinnemahoning

In the headwaters north of Wharton, a small First Fork is joined by Big Moores Run, Freeman Run, and then the East Fork as it flows south. Each of these is a fine trout stream in its own right. Their wild and stocked trout provided me with a good outing last June. With all of these tributaries, it is no wonder that the First Fork of the Sinnemahoning is a pretty good-sized stream by the time it enters the park.

Through most of the park, the First Fork



Photos: Mark A. Nole; map graphic: Ted Walker



Most of the First Fork is lined with grasses and weeds with patches of stream-side alders and stands of sycamore or maple scattered here and there. Where the stream splits, the islands are covered with sycamore and alders. This is one of the few Pennsylvania spots that reminds me of the scenes along some of the famous western rivers: Calendar scenes where fly fishermen cast with elk or deer looking on. Here along the First Fork one can often see white-tailed deer browsing peacefully while anglers try their luck nearby.

The meadow-like habitat also creates two conditions, one good, one bad. First, the good news: Grasses are homes for many grasshoppers and other insects. This makes late May and early June good times for anglers to fish beetle, hopper, cricket and ant imitations. Some bait anglers have mastered the use of live grasshoppers and they know that few trout can resist a properly presented hopper. Windy days put more of the terrestrials on the water and are often the best days to fish either naturals or imitations. The open areas and wide, shallow riffles allow the sun to eliminate most of the First Fork as wild trout habitat. It just gets too warm in the summer for wild trout, and that's the bad news. Most of the First Fork below the town of Wharton is a put-and-take trout fishery. In a few places, but too few, the First Fork is totally forested on both banks.

The Potter County section of the First Fork is heavily stocked both preseason and three more times during April and May. One of the very best places to find high densities of trout is on the delayed-harvest, artificial-lures-only area just north of the Potter/Cameron County line. This 2.1-mile-long area, which is clearly marked, is open for fishing with flies or spinners all year long. The mouth of Bailey Run is the upper limit of the delayed-harvest area. The Potter County section

is a medium-gradient stream with little meandering. Its long riffles and pools have a sandstone rubble bottom. High water quality and this type of substrate provide homes for many aquatic insects. It is therefore no surprise that it has many good mayfly hatches. Fly anglers enjoy fishing the heavy hatches of light cahills, green drakes, slate drakes, sulphurs, quill gordons, and others. The roadside adjacent to favorite sections of the stream is often full on the evenings of these hatches.



Brooks Run

Trout Fishing in Sinnemahoning State Park

of the First Fork was also stocked last October as a part of the Fish & Boat Commission's new fall stocking program.

The dam itself, a coolwater fishery, is stocked with trout preseason as well as three more times in the spring, twice in October, and once in February. This provides plenty of stocked trout to supplement the bass, catfish and others already present.

Four more small streams add their water to Stevenson Dam, which makes an even larger First Fork as it emerges from the dam and flows south out of the park. The stream is mostly tree-lined for its last eight miles and there are many streamside camps once it leaves the park. Besides the typical freestone rubble bottom, bedrock as well as some larger boulders add variety to the water. First Fork reaches even higher summer temperatures on the lower section. This Cameron County section is stocked preseason as well as twice during mid-April and early May.

The First Fork offers nice smallmouth fishing, too. Good numbers are found in the reservoir as well as above and below. I've had several magical June evenings in the section just above the reservoir where a scrappy bass grabbed my hair-tailed Mepps on nearly every cast. The smallmouths ranged from 8 to 12 inches.

All of the First Fork, from Costello in the headwaters to Sinnemahoning at the mouth, is paralleled by Route 872. This is a good-quality highway with wide berms and many places for anglers to park. The cars of fly fishing anglers line the highway at the hotspots during much of May and early June as their drivers fish the evening rise. Because Stevenson Dam is for flood control, Route 872 is on high ground and away from the stream through most of the Cameron County section of the park. Here one can get closer to the stream by taking one of the narrow park roads. This park road is very close to the stream just above the reservoir and again at and above the Forty Maples Picnic Area.

Brooks Run

Brooks Run has always been my favorite First Fork tributary. Its large rocks, small waterfalls and deep tumble pools make for scenic beauty that is hard to beat. This isn't a stream with just one pretty area. Almost the entire stream has a steep gradient and has cut a narrow channel at the bottom of a small ravine. It often flows around moss-covered boulders and over bedrock "washboards" as it rushes toward the Stevenson Dam. All of the stream is

well-protected from the sun's rays by a mixed hardwood-hemlock forest. Its water temperature can be attested to by my brother, John, who once took an accidental dive into cold water.

Brooks Run has a small native brook trout population that is well-supplemented by one preseason and three inseason stockings. Red worms or salmon eggs are the best bet in this fast-moving water during the early season.

Brooks Run is easily accessible from the dirt forest road, Brooks Run Road, that turns off of Route 872 across from one of the park entrances. The road parallels the stream, crossing it about two miles above the mouth. Because of the runoff from the forest road, Brooks Run turns brown after a hard rain, but it quickly recovers.

Lick Island Run

Another small mountain stream worth investigating is Lick Island Run. Lick Island Run crosses Route 872 and enters the First Fork about 2.5 miles south of the park. The lower 1.5 miles of this stream are classified Class A Wild Trout and therefore not stocked. A good population of native brook trout helps to make the trip worthwhile.

Lick Island Run is easily found by turning onto the first loop of old Route 872 on the west side below the breast of the dam. A small bridge crosses the stream. There is a cluster of camps here, and a short dead-end private road goes up near the bridge to more camps on the left side of the stream. Another dirt road goes by a camp on the right side of the stream. It is this road that leads off of the private ground and back into Elk State Forest where it dead ends at a small parking area 1.5 miles from Route 872.

Lick Island Run is slightly smaller than Brooks Run, and most of the lower channel is a moderate gradient with smaller stones. The best water on this stream is a several-hundred-yard-section about .3 miles before the road ends. Here, large rocks have forced the water to dig several nice trout-holding pools, one over 6 feet deep. All of the watershed is forested.

Bailey Run

Bailey Run, another small freestoner, crosses Route 872 and adds its water to the First Fork at the northern edge of the park, which is just below Wharton. The lower 1.5 miles of Bailey Run is stocked preseason and once during the season. It

also has a good naturally reproduced population of brook and brown trout. This lower section flows through weedy meadows with scattered trees and is paralleled by Bailey Run Road. Several camps and homes are near the stream in this area. Above where the road crosses the stream, Bailey Run is managed as a native brook trout fishery and classified as a Wilderness Trout Stream. Because it is more open, Bailey is fishable with bait, flies and spinners.

Lushbaugh Run

Another Wilderness Trout Stream is Lushbaugh Run. Lushbaugh is the least accessible stream in the area because it feeds into the northeast corner of Stevenson Dam, and no roads come near it. This is a large, forested watershed with over 4 miles of fishable stream. Although I have caught only small brook trout from this stream, I did once see a photo of a beautiful 14-inch brookie that was taken there. Lushbaugh Run is managed for wild trout.

The easiest (and this is not a good choice of words) way to get into Lushbaugh Run on foot is to wade across the First Fork just above the backwater to the dam and then walk down to the mouth. The last time that I walked into Lushbaugh, First Fork was too high to wade, so I trekked across the breast of Stevenson Dam and up along the east side of the lake to the mouth of Lushbaugh. This is a long walk in hipboots, but worth it if you hit the stream on a good day. If you are lucky enough to own a boat, Lushbaugh is just a short float from the boat launch area.

Other waters

Several other tiny native brook trout streams also feed the First Fork. Waters such as Muley, Norcross, Logue and Berge runs all contain some trout. If you try one of these when the water is low you'll think I'm crazy, but hitting one when the water is up can yield a surprising number of our state fish.

As you can see, the Sinnemahoning State Park area has much to offer any trout angler. There is the dam, the big water of the First Fork, and several smaller streams. Stocked trout fishing is easily accessed from dirt or paved roads, while wild trout fishing can be had near roads or in several more remote areas. All of this water has normal statewide regulations except for the delayed-harvest, artificial-lures-only section of the First Fork. This is open, but has special "no-harvest" regulations at this time of year.



There's a **Very** Large Trout in Birch Pool

by Jim Bashline

illustrations by Ted Walke

Most meetings at the Otter Creek Flyfishers Club were highlighted by nothing more than a few drinks, some fishing talk, a tackle trade or two and then upstairs to the bunkroom. This night, a spot of dissension threatened to disturb the fellowship. Roscoe Bates was the culprit.

No member of the 40-person organization really disliked Roscoe, but he had a way of gnawing at one's patience. He was not the best fly-fisherman in the club, but he was accomplished. In the 20 years the Wally Westerly Memorial Award existed, Roscoe had won it 10 times. He was now on a five-year streak, and even though no one minded if he won it again, his boasting had become obnoxious.

Each year, the day before Memorial Day, the Otter Creek Flyfishers would meet at noon and solemnly honor the memory of their departed founder, Wally Westerly. Wally had formed the Otter Creek Club during the late 1930s, when land was cheap and no one had any money to buy it. He somehow managed to talk a few fishing buddies into sharing a mortgage on two miles of prime trout water in the Pocono Mountains.

During the war years, Wally made the payments while many of the club's founding members were in the service. He was supposed to be paid back from club dues, but it never seemed to work out. Wally would turn the payments back to the trout stocking fund, saying he was "doing a bit better" at his hardware store and he wanted to make sure the younger members would always have trout in the creek. Wally was always the first one at the club on work days when the wing dams needed fixing or the clubhouse needed a new roof.

He was the glue that held the club together.

Wally died in 1965. He was 81 and had fished the Light Cahill hatch the night before his heart stopped beating. He died in the clubhouse. Wally's waders still hung from his private peg beside the fireplace and his warped Montague rod, with a size 14 dry fly stuck in the grip, slept quietly on the rafters overhead. Neither waders nor rod had been touched in 28 years.

The memorial award was established four years later after much wrangling about how best to honor Wally. It was decided to offer a fine bamboo fly rod each year to the club member who caught and released the biggest trout over 16 inches during the pre-Memorial Day



fish-off. Anglers fished in pairs in an on-your-honor arrangement. Fishing partners were selected by drawing to avoid any suggestion of cheating and all club members paid a \$50 entry fee. The money was used to buy the rod and replenish the club treasury. All club members tried to be on hand to fish in this popular event.

This year, 31 members were at the clubhouse. This many overnights strained the bunkroom, so tents were set up in the parking lot. David Briggs, a 48-year-old engineer, volunteered to sleep in one of the tents because he had to leave early in the morning and he didn't want his early departure to disturb the rest of the club members.

David stood in the open doorway of the clubhouse listening to the names being called out. Amos Tanner, the club secretary, pulled the members' names from a battered felt hat that had a half-dozen flies impaled on the sweatband. It had been Wally's hat. This ritual was established 20 years ago. Two names would be drawn. The two chosen would come forward, shake hands, touch the hat and say in unison, "In the name of Wally Westerly, may the trout of Otter Creek spawn freely forever."

An outsider would have thought it a silly ceremony, but the members took it seriously, knowing full well that few trout still spawned in their stretch of water. Two dozen rainbows more than 16 inches were stocked each year to make sure an award-winning trout would be caught on Wally Westerly Day.

"Fishing with Roscoe Bates," intoned Amos Tanner, "will be Art Stavisky." Stavisky had joined eight years earlier when his Uncle Walt passed on. Family folks, if they fished, had membership priority. Everyone had been glad Art was voted in; he was a good fly tier and had fished in the county all his young life. Art got up quickly to take part in the ritual. Roscoe Bates leaped to his side and chucked him with his elbow.

"Aha, my boy!" Roscoe chortled. "You and me 'uv never fished together on one of these outings. Now you'll get a chance to be with a winner. Maybe some of my luck will rub off on you."

"Come on, Roscoe," said Amos, "don't start on that stuff. Say the words."

Art and Roscoe shook hands and recited together. Then Roscoe laughed, "I can't wait to get my hands on that new Thomas and Thomas eight-footer. It'll look so nice there in the closet beside those Leonards and the Orvises...or is the plural Orvi? Ha-ha-ha."

The drawings continued with more in-between remarks by Roscoe. David Briggs motioned for Art to follow him out the door.

"Jeez, isn't he something," Art said as they walked into the parking lot. "I'd love to beat him tomorrow or see anybody beat him. He thinks he's got a corner on the award. But I guess he does—he seems to win the rod every year."

"Come over here to my tent; I want to talk to you about something," David said softly.

Art followed him and once inside the small, pop-up tent couldn't fail to notice a huge cardboard box on top of David's sleeping bag.

"I'm delighted you were chosen to be Roscoe's fishing partner tomorrow because I need a willing accomplice."

"What for?"

"It's a little complicated but I know how Roscoe manages to win so many of the Westerly Awards."

"You do?" Art's curiosity was beginning to rise.

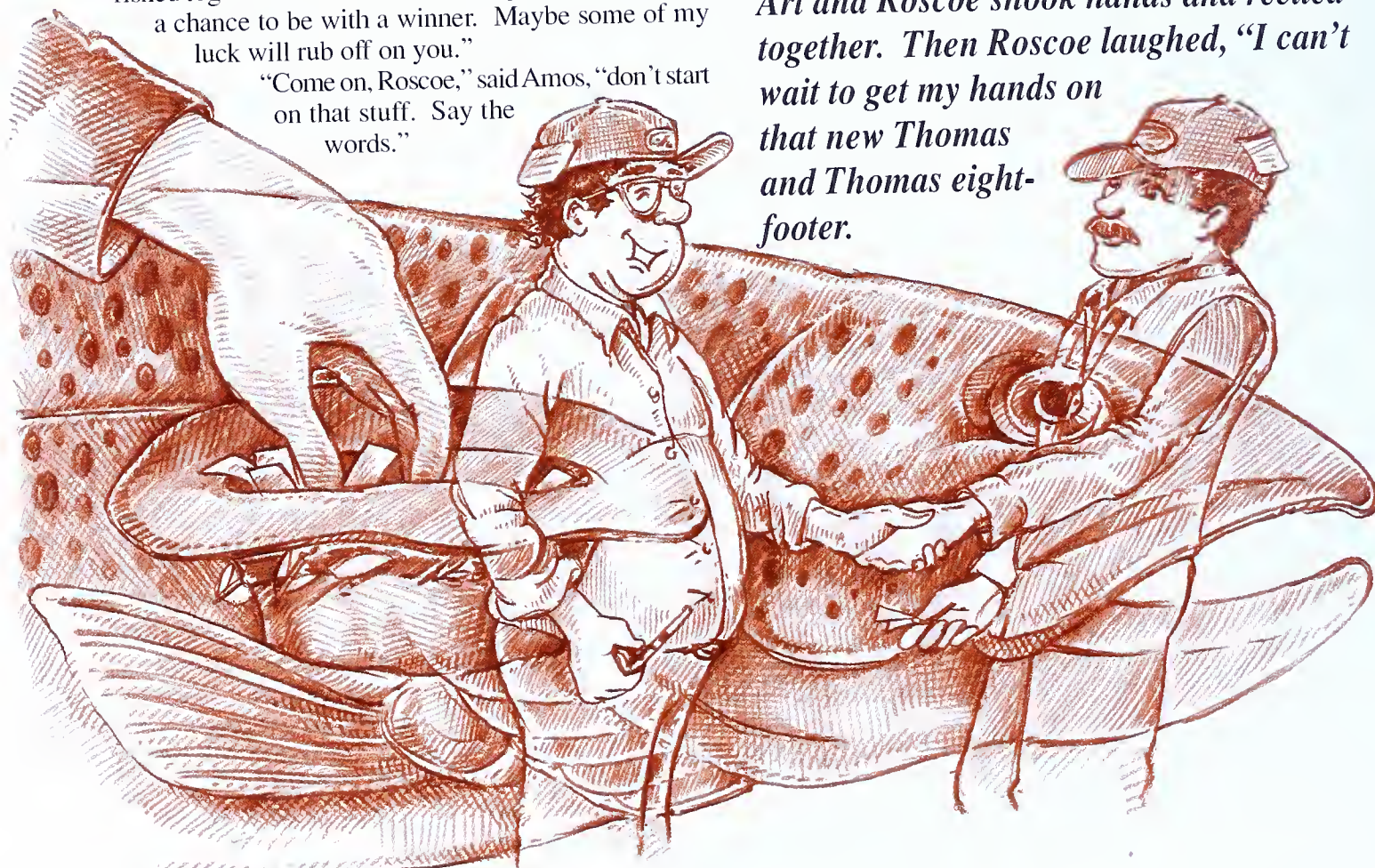
"Yes, and while it isn't fair, it isn't covered by any club rule, either."

"How does he do it?"

"Well, as you know, the Becker boys up at the hatchery stock the stream in the morning as they always do before the Memorial Day holiday, and guess who always stops by to pay them?"

"Why, Roscoe does, of course. He's chairman of the Trout Fund Committee. But he's bound by his word of honor and so is everyone else not to go near the stream until noon. He wouldn't dare cache a trout somewhere...would he?"

Art and Roscoe shook hands and recited together. Then Roscoe laughed, "I can't wait to get my hands on that new Thomas and Thomas eight-footer."



"No, not exactly," David went on, "but one of the Becker boys got a little in his cups last year and spilled the beans. Roscoe has him put four big trout in a particular pool for a handsome tip. Roscoe told him he'd never fish for those trout. He wants some of the 'old guys' to have a crack at a big one."

"Why, that crooked old slob," Art sputtered. "I'm going back in the clubhouse and call him on that. The nerve of that guy! He ought to give all of those rods he's won back to the club."

"Now wait a minute." David grabbed him by the jacket. "You have to remember that Roscoe still caught those fish fair and square. He had to with a fishing partner watching. He simply knew where to cast. At least I think that's all there was to it. But it doesn't matter. I've got a way to stop this and end Roscoe's boasting. Let me show you the biggest trout that will be caught tomorrow."

David opened the box. Inside was what looked like the largest brown trout in the world. It was more than 30 inches long and it glistened just like a fresh-caught trophy. The fish was lying on its side in a bed of crushed plastic foam and its eye sparkled realistically. Art touched its side; it felt soft and cool, as close to the real thing as any fake fish ever could.

"That's the best-looking mounted fish I've seen," Art exclaimed. "What are you going to do with it?"

"I'm going to catch Roscoe Bates and you're going to help me. I've been working on this trout with electronic engineers from my plant. You won't believe what it can do."

David rolled the trout upright and squeezed both sides near the dorsal fin. A panel popped loose and the back of the fish lifted off. Inside was a maze of waterproof wires and several cylinders leading to plastic tubes.

Art's mouth dropped open. "Why, it's a regular submarine!"

"It's more than that," David smiled. "Here, hold it by the belly while I close the maintenance port." He reached for a small, black control box. He pressed a button and the trout's mouth opened. He waggled a switch and the fins quivered. He touched another control and *whoosh*, compressed air escaped from holes in the trout's sides and vent.

"This trout will swim in all directions, dive, surface and even take flies. I've tested it for a month and can control it perfectly."

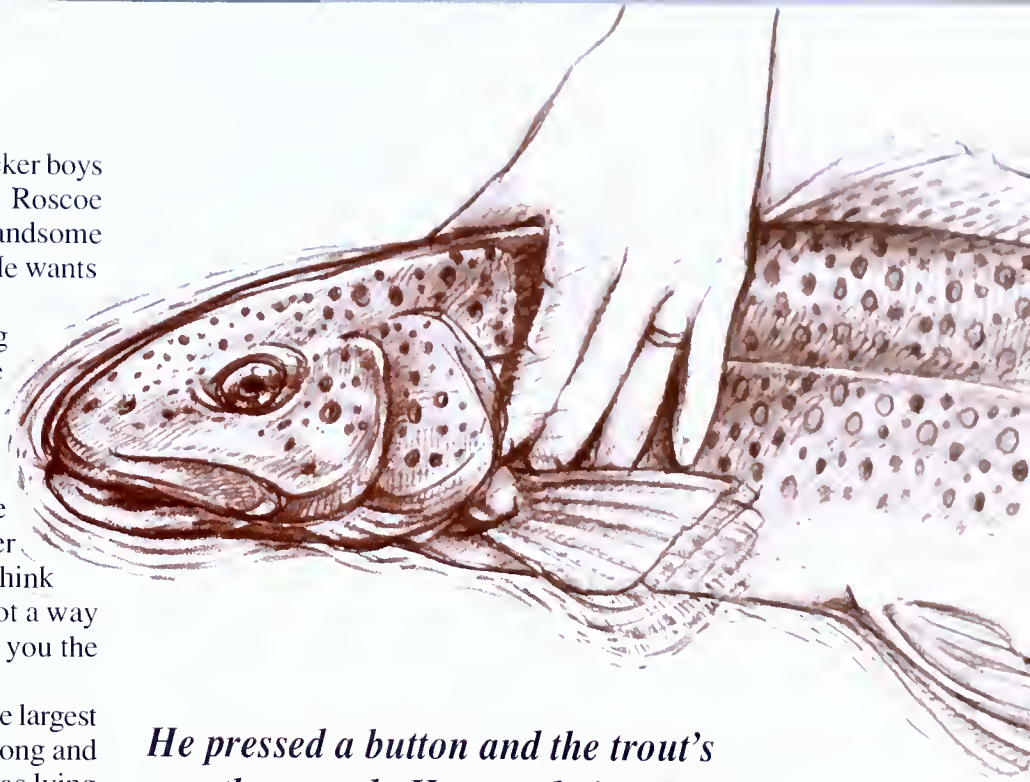
"Where do I fit into this plot of yours?" Art asked.

"Meet me here at 5 a.m. and we'll set things up while the others sleep. Roscoe, as last year's winner, has first pick of pools and he'll head for the Birch Pool. That's where the Becker boys told him they would stock the four big rainbows."

Roscoe Bates had another advantage in his quest for domination of the Wally Westerly Award. It might not have made much difference, but he thought it did. When no one was looking, he'd remove one of the beautifully tied Light Cahills that was stuck in Wally's old hat and attach it to his leader, then return it to the hatband at day's end.

Roscoe, in spite of his shortcomings, was a traditionalist and Wally Westerly's spirit was powerful. All of his award trout had been taken on a Westerly Light Cahill. If they had known, the other club members would have been furious; Wally's hat, like his fly rod, was sacred. Award fishing began at noon. The paired anglers chose their pools and 15 duos fanned out to begin the contest.

Roscoe did choose the Birch Pool and Art followed him to it. Art, at the first opportunity, was to devise a good excuse to get lost for a half-hour so Roscoe would not have a witness to the upcoming drama.



He pressed a button and the trout's mouth opened. He waggled a switch and the fins quivered.

"Ah, Art, my boy, I'm going to be kind to you. You take the lower end of the pool. It's always been the best place; I'll fish up where the little run comes in."

The pool was about 75 yards long; two anglers could easily fish it without getting in each other's way. If Art hadn't known better, he would have thought Roscoe was indeed giving him first advantage.

"Uh, gee, Roscoe, I don't feel too good. Maybe I drank a little too much last night. You go ahead; I think I'll go back there on the moss and lie down for a few minutes."

"Ha-ha-ha," Roscoe's familiar laugh. "You young bucks never learn. Don't go too far away with your rule; I've got to have my measurer around when I catch a good one."

Roscoe was delighted to have the pool to himself. He waded to within easy casting distance of the hotspot and glanced over his shoulder. Art was nowhere in sight. Good. Roscoe reached into his shirt pocket and extracted a couple of fish food pellets. Taking careful aim he tossed one of them directly to the spot where Cal Becker said a trout would be. It was. A 20-inch rainbow, fresh from the hatchery, snatched it. The same thing happened to the second pellet. Roscoe was ready once more to pull his yearly trick. At that moment, the waters parted in the center of the pool. Roscoe's jaw dropped. It was *a trout*!

As he watched, it surfaced and appeared to take something. In one majestic, curving swirl, the giant, black-spotted fish displayed a head as big as a football and returned to its holding position. Roscoe's hands began to tremble. Never had he seen such a fish. Here it was, feeding!

"If I catch that fish," thought Roscoe, "it'll not only be a club record, but it may be a state record." The great fish rose again and displayed its nearly yard-long form.

Roscoe was a good caster. He kissed the water perfectly with the Light Cahill and before the fly floated six inches, the giant shape began to move toward it. Roscoe swallowed an orange-sized lump. The trout appeared to look the fly over and drifted a bit to the right. Roscoe thought he might faint!

At the second cast, the trout did not hesitate. It came slowly with the practiced confidence trophy fish always have. Its jaws were open. The fly disappeared into that massive maw. Roscoe was no slouch as a fly fisherman; he did not strike too hard. The

There's a Very Large Trout in Birch Pool

far side of the Birch Pool. Roscoe had never felt such a powerful surge.

Where was Art? He'd need help netting this leviathan. And he'd need a witness.

"Art!" Roscoe was screaming. "Where are you? Get over here!"

Art, peeking through the bushes, was doubled over laughing.

The trout was tiring now and between screams for Art, Roscoe was trying to get his landing net unclipped from his shoulder strap. The fish was just six feet in front of him. It looked even bigger than Roscoe had first calculated.

Closer. Closer. The net was in his hand. Just a few more feet. The bow of the net moved steadily toward the enormous kype-billed head.

"Don't touch me with that net!" With stereophonic reverberation, the voice seemed to come from nowhere, yet everywhere.

"Who is that?" There was terror in Roscoe's voice.

"It is I." The echoing voice spoke again. "I am the great trout of Otter Creek and you will not touch me with that net, for I am the spirit of Wally Westerly!"

Roscoe's knees went limp. His mind was a ball of cobwebs.

"I'm either dead or I've gone mad," he said.

"Neither," the voice continued. "Art is asleep; you are alone with me and you must do exactly as I say."

Roscoe had never been a religious man but he was suddenly considering prayer.

"You have done some bad things, Roscoe Bates, and they have not gone unnoticed. You are a good fisherman, but it was not necessary to cheat by having those special rainbows stocked. And the pellets. Unspeakable!"

"You know about that! Oh, I'm sorry." Roscoe was beginning to babble. "It was all in fun. I...I'll give the rods back to the club...I'll confess all...I'll quit fishing." He didn't know what he was saying.

Suddenly, he got a grip on himself. This is a dream, he thought. That's it; I'm dreaming. Land this fish and the dream will end. Or maybe I can't land it. That's what dreams are always like. They always end just before the big thing happens. He reached out again with the landing net.

"Do not touch me with that net!" Briggs had turned the volume up. "Cut the leader, return to camp and promise you will never again resort to cheating on Award Day."

"You mean I can't catch you, Wally, or Great Trout...or whatever you are? Art, where are you, Art?"

Art was behind some hemlocks, collapsed in convulsive laughter. Briggs, too, was having a hard time keeping his voice straight as he spoke into the microphone.

"Do as I say," the great trout boomed again. "Cut the leader, return to camp and tell no one about this. If you tell, your transgressions will be revealed to all."

Dream or no dream, Roscoe figured he couldn't chance it. He leaned forward, stretched the elastic cord tied to his clippers and snipped the leader about 10 inches from the trout's jaw.

"Goodbye, Roscoe—remember this day."

fly stuck well into the vinyl lip of Briggs' electronic brown trout.

As large trout do, this monster dived to the bottom and made a run for the protection of the tree roots on the deeper,

Roscoe watched as the huge, black-spotted fish fanned slowly into the shadows of the far side of the pool and vanished into the depths.

As Roscoe waded back to the bank, Art appeared from the bushes. Roscoe grabbed his hand, held it and looked beseechingly into his eyes.

"Did you hear me call?"

"No. Why, did you catch a big one?"

"Why, no. I...I don't know exactly what happened. I had this big fish on. It was so big that...and it talked. I mean, Wally talked...and, oh my, I think I'll go back to camp. It's kind of warm and I think I need a drink..."

Art chewed on the inside of his cheek to keep from laughing.

"Yeah, I guess you should, Roscoe, you look pale. I'll fish here a little longer. See you back at camp."

Roscoe sat alone near the fireplace, his hand around a glass of Scotch. He stared at the hat on the table. Wally's hat. Art sat on the other side of the fireplace. "No," Art spoke for Roscoe. "He didn't catch one today. He came in early. He wasn't feeling good."

"Come on, Roscoe," Amos said, "don't take it that hard, you can't win every year. You've got to give the rest of us a break."

"The fly," Roscoe muttered, "how did that fly get back in the hat?"

"What are you talking about?" Fred Sloat asked. "What fly?"

"Oh, never mind," Roscoe stammered. "Congratulations, Fred. I'm glad you won the Award."

The rod was presented and after a round of congratulations, the members began to drift out of the clubhouse to the parking lot.

At that point, Dave Briggs came through the door. "Hey, don't everyone leave. Sorry I missed the fish-off but I took care of business quicker than I thought and decided to come back for the evening rise."

Art motioned Dave into a quiet corner of the big room. "Jeez, it really worked," Art whispered, "maybe too well. Do you think the guy is going to be okay? I mean, look at him over there. He hasn't stopped staring at that fly. Man, that was the final touch."

"What was the final touch?" Dave asked.

"You know," Art said, "taking that fly of Wally's and getting it back here in the hatband without anyone knowing. I saw Roscoe sneak it off Wally's hat early this morning but I didn't know you knew he had taken it."

"I didn't." Dave was genuinely puzzled.

"Yes, but I heard you order Roscoe to cut it off with a piece of leader and there it is, back in the hatband."

"There wasn't any fly in my trout's jaw when I retrieved it about an hour ago. Had a tough time doing it without being spotted. Amos and Fred began fishing the pool just after you left."

"Well, if you didn't put the fly back in the hatband, who did?" Art's eyebrows began to arch.

"I know Roscoe didn't; I saw him cut the leader. I know I didn't. Roscoe was sitting here looking at that hat when I got back, and I was here before you were."

Dave and Art stared at each other. Their eyes shifted to the hat. The still-damp Cahill was there all right...with a 10-inch piece of leader attached. Roscoe was still parked in the chair at the end of the table, his eyes riveted to the fly. He would study it for a long time.

So would Dave and Art.



On the Water

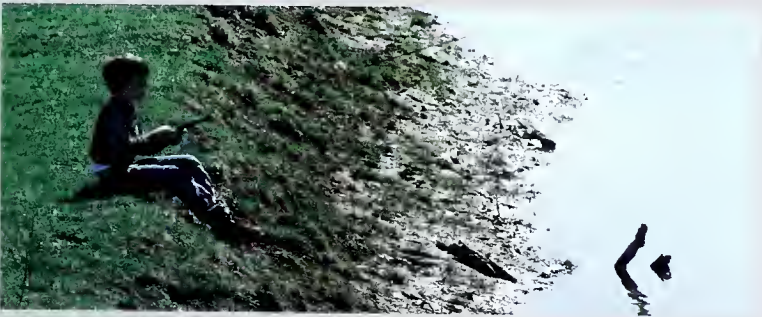
with Robert L. Petri

Happy Birthday, T.R.

The fishing trip was a birthday gift for a favorite nephew. And so, with the calmness of a lamb led to the slaughter, I bestowed the gift of a day spent chasing wild brook trout in the small streams of the Allegheny National Forest on my nephew T.R. for his ninth birthday. We sat on his living room rug and made our plans. My sister, T.R.'s Mom, volunteered to supply us with brown bag lunches.

The appointed day arrived and I pulled into T.R.'s driveway at 7 a.m. We left the rolling farmlands of southern Erie County behind and drove on toward Tionesta, one of the many gateways to the rushing trout streams of the national forest.

Somewhere around Titusville I turned to T.R. and asked him how many fish he thought he might catch. He looked up from his baseball card magazine and said, "If I had a Roberto Clemente rookie card, it would be worth about five thousand bucks. See, says so right here." I decided to dispense with the small talk and drive.



At about 9:30, we arrived at our first destination, a small Forest County stream popping with little brookies. We started upstream, walking the banks, looking for good places to drop a line. I explained how we would have to sneak and keep back from the stream or we would scare the fish. T.R. said OK and stopped throwing rocks in the creek.

An hour went by with no luck. I could take the little fish almost at will, but I could not get T.R. to sense the take and set the hook. A hundred trout could have been attacking his fly and he wouldn't have known.

I decided to try to teach by example. I flipped a Woolly Worm along an undercut bank and was immediately fast to a little brookie. I hauled it up out of the water and called for T.R. to come and see. He sauntered over and had a look. "Pretty dinky" was his first observation. "But it's wild, and it's a *real* native trout," I explained. "Really," he said, stifling a yawn. "Is it close to lunch time yet?" I said that it was getting there, and we would eat when we got to the next stream. "Cool," he said. We left.

The 25-mile drive to Minister Creek, our next destination, went by in a flash. We pulled into the Forest Service parking lot and set lunch up on a picnic table. He told me about his baseball card collection and how it would someday make him wealthy and influential. I told him that there were a lot of trout here and I was sure he would catch some. He gave me his best nine-year-old skeptical look. We proceeded to have at them again.

The change of streams didn't help. I couldn't buy him a fish. After another two hours, I suggested that we head for a small lake on the way home and try for some bluegills. I threw in an offer of an ice cream cone on the way back. T.R. considered this and politely said, "As a kid, I know that I'm supposed to really be into ice cream, but to tell you the truth, I can take it or leave it. I'll have one if you're going to stop. Whatever trips your trigger." A part of me longed to have a trigger to trip at that point.

We stopped and got the cones. T.R. downed his with a relish that belied his earlier observations on the subject. He told me he was negotiating for a 1968 Hank Aaron card. So far, it looked pretty good. I told him he probably had a future in the commodities exchange. He looked at me the same way a cow looks at a passing train.

The little lake served as a municipal water supply, and the dry weather had left a wide ring of mud all along the shoreline. I found a likely spot where T.R. could cast to the edge of a weed bed and take a bluegill or two. All would be well after all. I found a dry spot and had a seat.

The screams began about a minute after I sat down. "I'm stuck, I'm stuck, I'm gonna drown!" T.R. cried out in panic. I jumped to my feet. He was standing in water about halfway up his calf. His feet were stuck in the muddy bottom. He didn't look as if he were going to drown.

"Calm down," I said softly. I waded out to him and told him to take my hand. He grabbed hold and lurched ahead. I wobbled in my boots. He pulled again. The laws of physics took over. We both went down into the goop, rods, vests and all.

I pulled us both out of the smelly, slimy soup and onto the bank. Gray mud dripped from my earlobes and there was murder in my heart. "I think it's time to go home," I suggested.

Back at the house, T.R. bolted for the door before I could even kill the ignition. I was just clearing the doorway as he told his Mom, "Uncle Bob threw me in the lake 'cause I couldn't catch any fish." I said that this left out a few of the more important details of the event. His mother sentenced him to go feed the dog.

My mud-encrusted clothes were beginning to dry and take a set as I headed for my car to go home. I felt like a papier-mache work in progress. T.R. came running around the corner of the house to meet me. He thanked me for taking him, and said he had learned a lot about fishing, and hoped we could go again. I mussed up his hair and said, "Anytime, pal." Who can stay mad at a kid?

I arrived home and showered vigorously. While under the cleansing flow of the nozzle, it occurred to me that somewhere on a dusty shelf in my apartment there was an old shoebox of baseball cards from three decades ago. I wondered what they're worth. I bet T.R. could tell me.





CALLING ALL CLUBS

Why Not Become a Supporting Member of PLAY?

Dear PLAY:

Thanks for the neat stuff. I really enjoy the information. I go fishing a lot. When our family goes fishing we use worms, minnies, cheese, corn, and chicken liver for bait. We usually catch a lot of fish with it.

Sincerely,
Lauren

Dear PLAY:

I just wanted to thank you for all the neat things you gave me. I really like the things you gave me. And my dad liked it, too. He asked me if he could have a fish sticker to put on our Jeep. Well, thanks again.

Your Fan,
Shannon

Dear PLAY:

Two months ago my family and I went fishing. We went to the Little Lehigh Park in Allentown. My mom and I found fish bodies, guts, mostly fish heads. Can you give information on how to stop this?

Your PLAY Member,
Matthew (age 10)

PLAY
Pennsylvania • League • of • Angling • Youth

What is PLAY and why are these young people writing to it?

The Pennsylvania League of Angling Youth-PLAY-is an educational membership program for children that has taught thousands of youngsters about fishing, boating and the aquatic environment since 1980.

It is a proven fact: Kids like PLAY. Why? Maybe because PLAY is about what many children are interested in and may not get anywhere else. Fun things-like fishing, boating, frogs, snakes, turtles. And serious things, too, like how to protect clean water and endangered animals, being safe around the water, and using good outdoor manners.

Any child can become a member of PLAY. The stories and puzzles are written especially for children in fourth through sixth grade.

How Can Your Club Help?

Many children haven't discovered PLAY. Sometimes there's no adult around to show them the fun of fishing. Some parents have little or no knowledge of fishing. A membership in PLAY can help these young people become interested in a lifetime of fishing and learning about the outdoors.

Your organization can play an important part in helping boys and girls get started in fishing and the outdoor world by becoming a Supporting Member of PLAY. It's easy to do. Just purchase 10 or more memberships and designate them to the children of your choice.

Pennsylvania's future anglers might live right next door to you. Whether they learn to love Pennsylvania's outdoor heritage could depend on you and your club or organization. The next time you hold a children's fishing event or take a kid fishing, you can make the fun and learning last a whole year through PLAY.

For a \$3.00 one-year membership fee, each child you

sponsor will receive a packet of goodies, including:

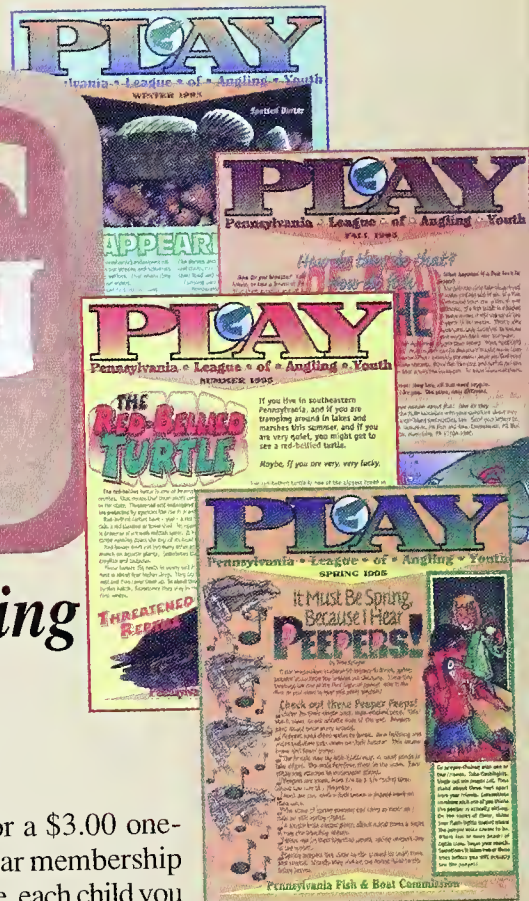
- A PLAY membership card
- An embroidered PLAY patch for the year of membership
- A "Good Luck" fishing hook
- A "Whistle for Safety"
- Stickers and tattoos
- Stories and puzzles about fish, amphibians, reptiles, fishing and boating
- And a quarterly newsletter written just for kids!

For more information, or to receive your "Supporting Member of PLAY" application form, contact: **PLAY, PA Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000; 717-657-4518; FAX: 717-657-4549.**

A big "thank you" goes out to these two groups as our first "Supporting Members"!

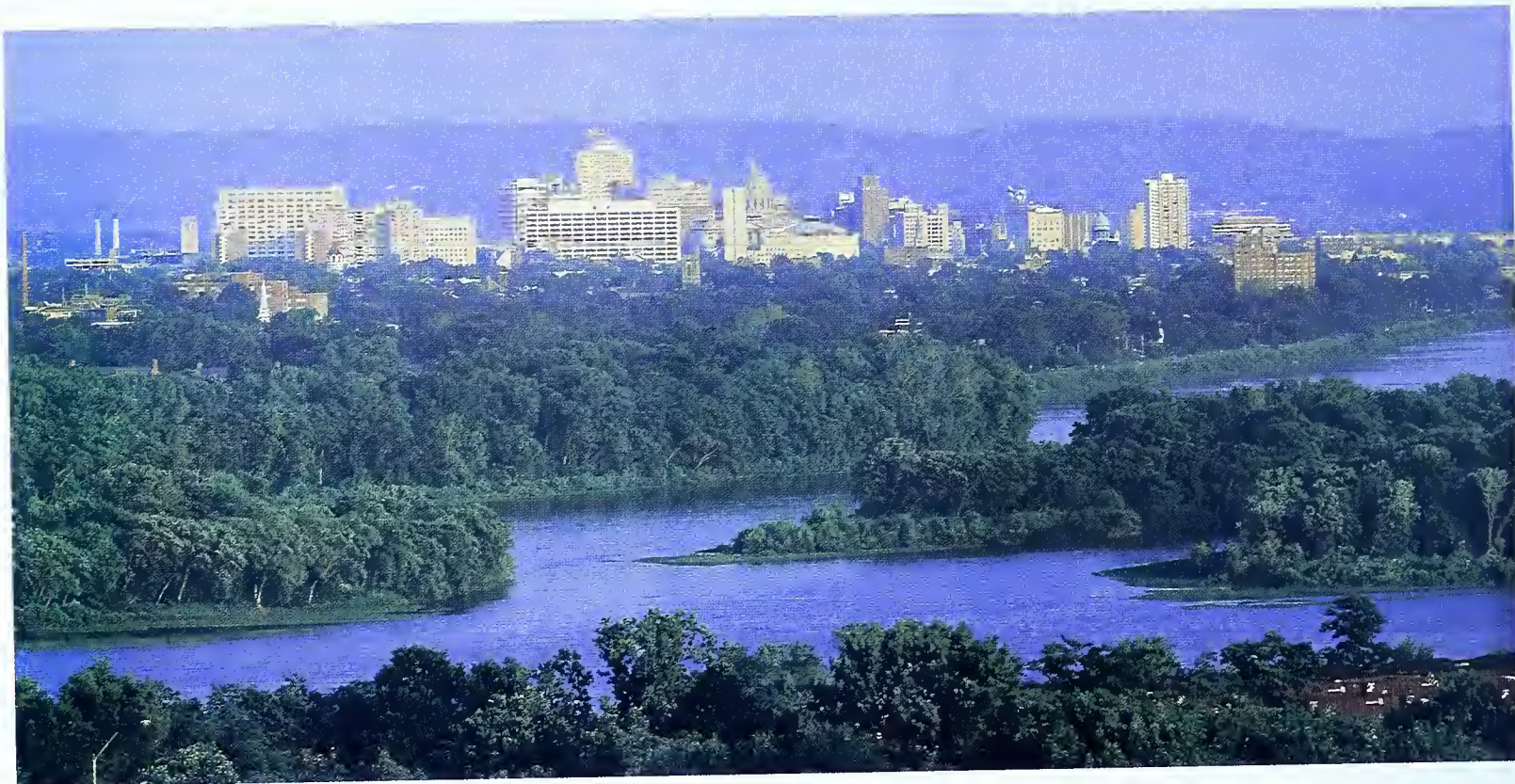


- Coatesville Police Department for sponsoring 11 children as PLAY members
- South Central Pennsylvania Bassmasters for sponsoring over 30 PLAY members.

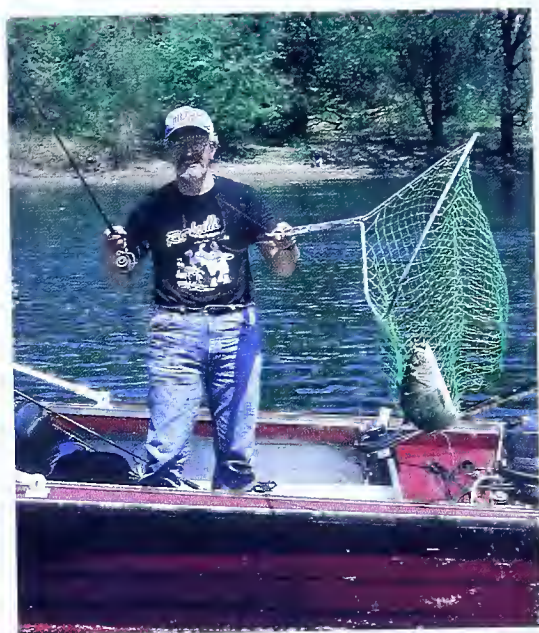


FISH RESTORATION and PASSAGE *on the Susquehanna River*





A multi-million dollar program to return American shad to their historic range is underway. This restoration program is one of the largest of its kind ever envisioned and has been a model of persistence, cooperation and long-term commitment.



This publication was cooperatively produced by:
Alliance for the Chesapeake Bay

Chesapeake Bay Foundation

**Pennsylvania Department of
Environmental Protection**

Pennsylvania Fish and Boat Commission

Susquehanna River Basin Commission

U.S. Fish & Wildlife Service

Few Pennsylvanians are aware that the American shad once ruled the waters of the Susquehanna River and its tributaries. Their sheer abundance made for bountiful harvests each spring during their spawning runs. They were one of the region's most valued commodities for commerce and daily living through the 1830s. Tragically, the shad's natural migratory cycle was broken by human activities, primarily the construction of dams.

A multi-million dollar program to return American shad to their historic range is underway. This restoration program is one of the largest of its kind ever envisioned and has been a model of persistence, cooperation and long-term commitment.

Restoration program participants are:

- U.S. Fish & Wildlife Service.
- National Marine Fisheries Service.
- Susquehanna River Basin Commission.
- Pennsylvania Fish and Boat Commission.
- Maryland Department of Natural Resources.
- New York Department of Environmental Conservation.
- PECO Energy (owner of Conowingo Dam).
- Pennsylvania Power and Light Company
(owner of Holtwood Dam).
- York Haven Power Company.
- Safe Harbor Water Power Corporation.

In this publication, we take you on a journey to learn the history of these fish, the reasons for their demise, and the noble efforts to restore migratory fish populations in the Susquehanna River watershed.



A Lost Legacy: American Shad in the Susquehanna River



Susquehanna Flats, MD, around 1900.

Long before the first Europeans settled the interior of Pennsylvania, great numbers of fish migrated hundreds of miles from the ocean each spring to complete their life cycle in the Susquehanna River. Shad, river herring and eels were important sources of food for Native Americans for centuries, and their fishing skills, using brush nets and rock-crib traps, were passed on to early settlers on the frontier. The first formal shad fishing companies were established by Connecticut Yankees laying claim to the northern tier of Pennsylvania in the 1750s. These settlers to the Wyoming Valley brought netmaking skills and introduced seines for harvesting the plentiful shad. Their control of the fishery in Pennsylvania waters contributed to the Yankee-Pennamite Wars (also called the “shad wars”), which continued for about 30 years. Although the territory was awarded to Pennsylvania by the new Congress in 1782, individual land claims by Connecticut settlers were eventually honored.

It seems that the annual harvest of shad from the upper Susquehanna during the several decades following the American Revolution was limited only by the availability of salt needed for preservation. Although shad fishing occurred during only a few spring months, the species comprised the most valuable “crop” from this region of colonial Pennsylvania, and no family was without its share.

Shad are reported to have reached the Susquehanna headwaters near Cooperstown, NY, before the development of dams at Binghamton. This 640-mile journey from the sea was the longest recorded for the species on the Atlantic Coast. The historic record suggests that shad reached the foothills of the Alleghenies near Hollidaysburg, on the Juniata River, and at least to Lock Haven on the West Branch. The closely related river herring (alewife and blueback herring) also were plentiful throughout the river basin but were not considered as valuable as the shad. Shad sold for between 3 cents and 20 cents apiece in the early 1800s. A bushel of salt typically traded for 100 shad.

Leasing and transfer of fishing rights on many river islands are well-documented in the public record. There were at least 40 separate shad fisheries located in the North Branch between Northumberland and Towanda before 1830, and individual recollections of many of these fisheries were assembled in 1881 by the Wyoming (PA) Historical and Geological Society. Even though early 19th century harvest records are largely anecdotal, typical catches numbered in the hundreds each day and night, and many thousands of shad were annually reported for each fishery. Traditionally, the full catch of shad from the season’s first Sunday haul was provided to the widows and orphans of the neighborhood, thus getting

its name “the widows’ haul.” It was reported that the widows’ haul at the Stewart fishery located midway between Wilkes-Barre and Plymouth in 1790 was 10,000 fish.

There is little doubt that shad numbers were great. The North Branch fisheries alone accounted for several hundred thousand fish each year.

The initial demise of shad and herring runs in the Susquehanna River was related to the construction of dams that blocked migrations. Hundreds of mill dams were erected in tributaries, and although passageways for fish were required as early as 1800, few were developed. Shad fisheries on the mainstem Susquehanna up to the New York state line flourished until 1830. Over the course of the next five years, feeder dams for the new Pennsylvania canal system were erected at Nanticoke, Shamokin, Clarks Ferry, Duncan’s Island and Columbia. The Juniata River was dammed a few miles above Newport.

Hundreds of miles of spawning habitat and all river fisheries above Columbia were lost. Throughout the remainder of the 19th century, sizable shad fisheries developed in the river below Columbia Dam and at the head of the Chesapeake Bay.

In 1866, immediately following the Civil War, the Pennsylvania legislature passed a law directing persons or companies that owned dams on the Susquehanna River and certain tributaries to “make, maintain and keep up a sluice, weir, or other device for the free passage of fish and spawn, up and down the streams” This same Act created the office of a commissioner, appointed by the governor, to oversee and enforce the fish passage provisions. This appointment was the forerunner of the present-day Pennsylvania Fish and Boat Commission.

The Tidewater Canal Company built the first of several fish passages in the Columbia dam in 1867, but because of high water velocity and turbulence in the structure, few shad ascended beyond that point except in years when floods and ice produced great breaks in the dam. The first Pennsylvania Fish Commissioner, James Worrall, blamed the further demise of shad runs on illegal fish traps and weirs that destroyed millions of juvenile fish trying to make their way to

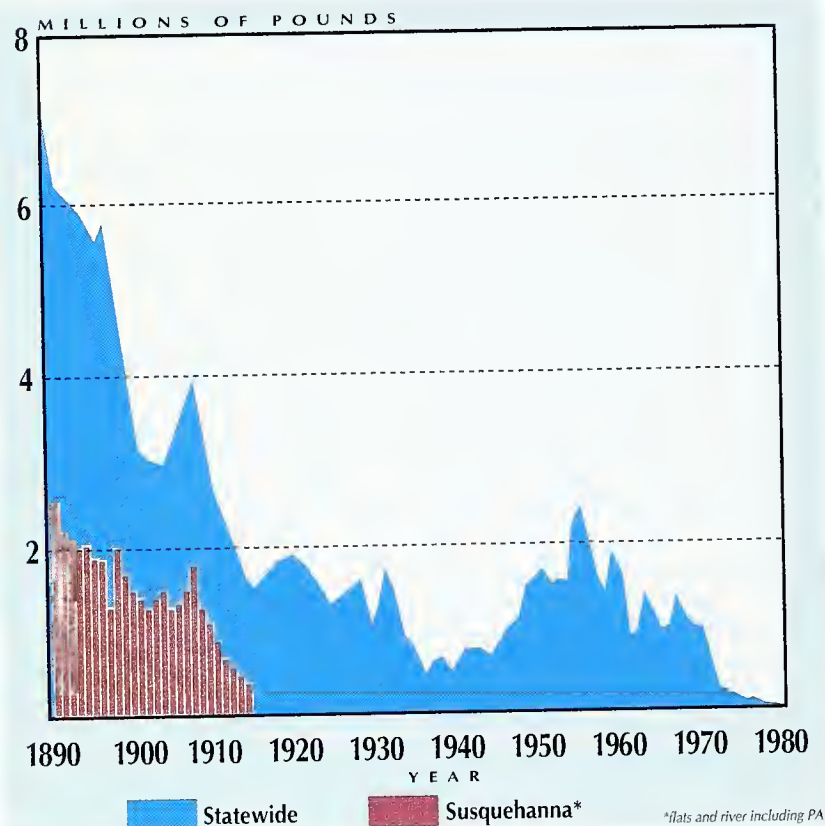
sea, and on uncontrolled harvest of shad near the river’s mouth by Maryland fishermen using huge gill nets. Reportedly, 761,000 shad were taken there in 1871.

Excessive harvest of spawners and inadvertent killing of great numbers of juvenile fish were not the only factors driving the shad population down. Throughout the 19th century, the water quality of the Susquehanna River was greatly diminished by coal mining operations in the North and West branches, and by siltation and erosion resulting from extensive timbering operations, particularly in the West Branch. Industrial and agricultural development in the lower basin and sewage discharge from growing riverside cities added to this pollution problem.

Railroads replaced the canal system, and by the late 1800s shad runs resumed once the dams at Columbia and farther upstream were abandoned and breached. The U.S. Fish Commission (now the National Marine Fisheries Service) has maintained harvest records from all fisheries since about 1880. Annual Pennsylvania shad landings in the Susquehanna River during 1890 to 1909 averaged 252,000 pounds each year, equivalent to 63,000 fish. In 1896, the shad catch in the river—both in Pennsylvania and Maryland—was 140,000 fish. The total Maryland shad catch that year was about 1.4 million fish, constituting the most important fishery of the Chesapeake Bay.

Between 1904 and 1932, four hydroelectric dams were built on the lower Susquehanna River. The Holtwood Dam was completed in 1910. Located only 25 miles above the river mouth, many of the best historic fishing islands were inundated. Fish passage design was very primitive, and although fishways were included in this construction, they once again failed to pass shad. By 1915, the Susquehanna River shad catch fell to 33,000 pounds. By 1921 there were no shad to be harvested. When the 95-foot-high Conowingo Dam was built at river mile 10 in 1928, state and federal fishery authorities conceded that development of effective fish passageways at high dams was not practical. The Susquehanna River shad resource was lost.

Commercial Shad Landings in Maryland, 1890-1980





40 Years of Shad Restoration

By the early 1950s, fish passage technology had improved and studies were underway to assess the possibility of restoring shad runs to the Susquehanna River. Over the course of about 15 years, these state-sponsored and utility-sponsored efforts included stocking tagged shad above dams to determine their willingness to move upstream and to reproduce, engineering and biological feasibility studies for proposed fish passage facilities, and evaluating the suitability of the river to support runs of migratory fishes. Results of the fish passage engineering and habitat suitability studies were favorable, but questions remained on the abundance of shad reaching the Conowingo Dam and their willingness to continue migrating.

In 1969, representatives from the U. S. Fish and Wildlife Service, the Pennsylvania Fish Commission (now the PA Fish and Boat Commission), the New York Department of Environmental Conservation, and the Maryland Department of Natural Resources joined to form the Susquehanna Shad Advisory Committee. The committee worked closely with the utility companies that owned the dams. In 1970, these parties reached an agreement to stock the river with shad eggs

and to develop a fish-trapping facility at the Conowingo Dam.

Philadelphia Electric Company (now PECO Energy Company) constructed a \$1 million experimental fish-collecting device at the west side of Conowingo Dam. This lift, or elevator, has operated every year since 1972, and over a five-year period, 200 million shad eggs were placed in hatching boxes in the river. In 1976, egg stocking was replaced with culture and release of larval shad. Using utility funds, the Pennsylvania Fish Commission developed the only American shad hatchery in the world, the Van Dyke Research Station at Thompsettown, Juniata County, PA, on the Juniata River. Also that year, utility membership was added to the Shad Advisory Committee, and the group was renamed "Susquehanna River Anadromous Fish Restoration Committee" (SRAFRM).

The shad population declined sharply in the upper Chesapeake Bay after 1971. Overfishing, poor river conditions and flooding effects related to Tropical Storm Agnes, which passed through the basin in June of 1972, were among the contributing factors. From 1972 through 1980, only 945 shad were collected at the Conowingo lift, and the hatch-



At left, Conowingo Dam spans the Susquehanna River about 6 miles below the Pennsylvania-Maryland border and 10 miles above the mouth of the Susquehanna River at the head of the Chesapeake Bay.



Above, schematic view of typical fish elevator as used at Conowingo Dam.



Photos and diagram courtesy of PECO Energy Company

ery stocked seven million shad fry and fingerlings in the Juniata River. All shad fisheries in Maryland waters of the Chesapeake Bay were closed in 1980 in response to the continued decline.

In 1979, the U.S. Fish and Wildlife Service established a full-time Susquehanna River fisheries coordinator to oversee the program and to develop a "Strategic Plan for Restoration of Migratory Fishes to the Susquehanna River." The goals of that plan are to reopen the river to natural migrations and to restore annual spawning populations of two million shad and 10 million herring within 25 years of fish passage development. The Susquehanna River Basin Commission included all components of the strategic plan in its Comprehensive Plan for the management of the basin.

Long-term operating licenses for all four Susquehanna River hydroelectric projects were renewed by the Federal Energy Regulatory Commission in 1980. At that time, all questions related to shad restoration and fish passage requirements at the dams were addressed at a formal hearing held in Washington, D.C. This hearing pitted fishery resource agencies, the Susquehanna River Basin Commission and two environmental groups against the utility companies. All parties were urged to negotiate a settlement that would meet their common purpose of designing and implementing a cost-effective program to rebuild shad stocks returning to the river.

Such an agreement was reached with owners of the three upstream dams in December 1984. As part of the agreement, the utilities provided \$3.7 million over the 10-year period 1985-1994 to fund trap and transfer of adult shad, expand hatchery operations, and conduct other SRAFRFC-approved studies related to shad restoration. SRAFRFC was expanded to include representatives from each of the dam owners and the Susquehanna River Basin Commission. All parties agreed to resolve outstanding issues related to the design and construction of fish passage facilities at Holtwood, Safe Harbor and York Haven projects once Philadelphia Electric Company initiated construction of permanent passage facilities at Conowingo Dam.



The new east lift at Conowingo Dam uses flowing water to attract migrating fish into collection chambers where they can be collected for release or transport to upstream spawning areas.

With this secure funding agreement in place, hatchery production increased substantially, averaging over 10 million shad fry each year. Also, the catch of returning adult shad at Conowingo improved from a few hundred fish each year in the early 1980s to many thousands of shad by the end of the decade.

In response to this improvement and other costly measures imposed by the federal regulators, Philadelphia Electric Company reached a separate agreement with resource agencies to construct a permanent fish passage facility at the east side of the Conowingo powerhouse capable of

initially handling 750,000 shad and five million herring. The facility was designed to accommodate twice this capacity with the addition of a second hopper. The east lift was built in 1990 at a cost of about \$12 million and began operating in April 1991. This commitment at Conowingo gave impetus to upstream dam owners to begin fish passage design at their facilities, based on the 1984 agreement.

During 1985-1995, over 150,000 adult shad were released to spawn above dams, and the Van Dyke Hatchery stocked over 100 million shad fry. The annual return of shad to Conowingo Dam increased steadily from fewer than 2,000 to over 60,000 fish. The program is obviously working.

On June 1, 1993, owners of the three upstream hydroelectric projects reached a final settlement with state and federal fishery resource agencies to construct permanent fish passage facilities at Holtwood and Safe Harbor dams by spring 1997, and at York Haven by spring 2000. There were numerous disputes over the previous 25-year period. Still, the shad restoration program on the Susquehanna River has been a model of persistence, cooperation and long-term commitment among resource agencies and private utility companies who share a common goal of restoring migratory fish runs. This is the largest effort of its type ever undertaken for American shad, and the anglers from the three basin states will one day reap the benefits as this long-lost resource returns to the river.



Restoration Approach

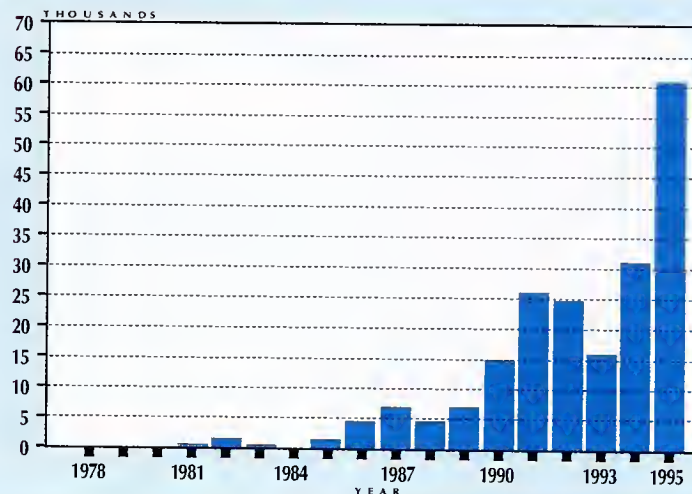
Restoration of shad to their historic abundance in the Susquehanna River requires a multi-faceted approach—restocking above blockages, constructing fish passage facilities, improving degraded habitat, and regulating the harvest of adult fish. So far, restoration efforts have concentrated on two main components—trap and transport of adult migrants, and hatchery culture.

The trap and transport program begins at Conowingo Dam, where PECO Energy has built two fish lifts to trap migrating fish. The west lift collects fish for transport by truck to upstream spawning areas. The newer east lift is also capable of trap and transport, but its primary role is to release fish directly into Conowingo Reservoir. These lifts use flowing water to attract migrating fish into collection chambers where they can be crowded and lifted in large steel buckets. When operating for the trap and transport program, the lifts dump thousands of fish into large tanks. Biologists then sort the fishes by type, removing shad and river herring to holding tanks. These fish are later transported by truck to upstream spawning areas at Middletown and Columbia. The other fishes are released back into the Conowingo tailrace.

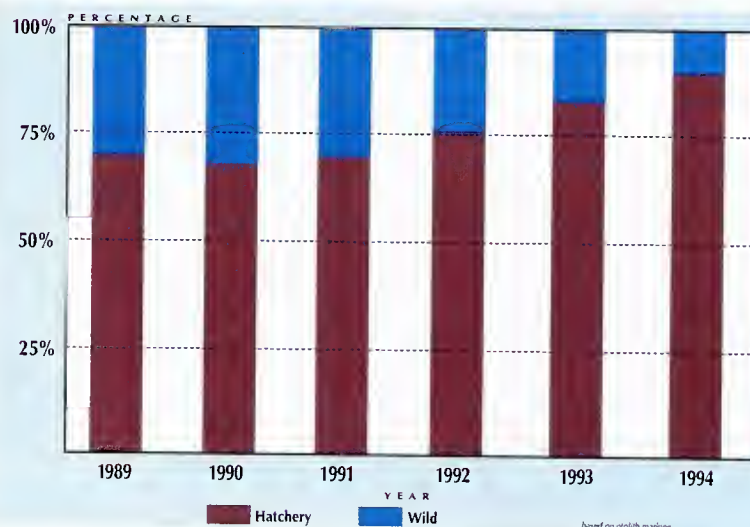
The second component, hatchery culture, has resulted in the rearing and stocking of millions of shad into the Susquehanna River. American shad are collected during their spawning runs in other East Coast rivers, primarily the Delaware and Hudson. These adults are stripped of their eggs, which are then fertilized. The fertilized eggs are delivered to the Pennsylvania Fish and Boat Commission's Van Dyke Research Station.

After seven days of incubation, the tiny, fragile fry emerge from the eggs. Three-day-old fry are fed a combination of live brine shrimp and finely ground dry diet. After seven to 21 days of culture, the fry are carefully scooped from the tanks and released into the river. At this stage, they are less than two-thirds

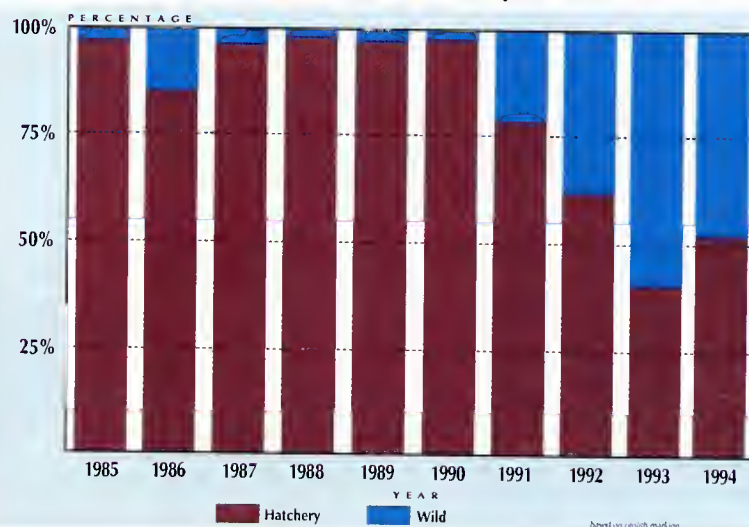
CAPTURE OF RETURNING ADULT SHAD-CONOWINGO DAM FISH LIFTS



ORIGIN OF RETURNING ADULT SHAD-CONOWINGO DAM

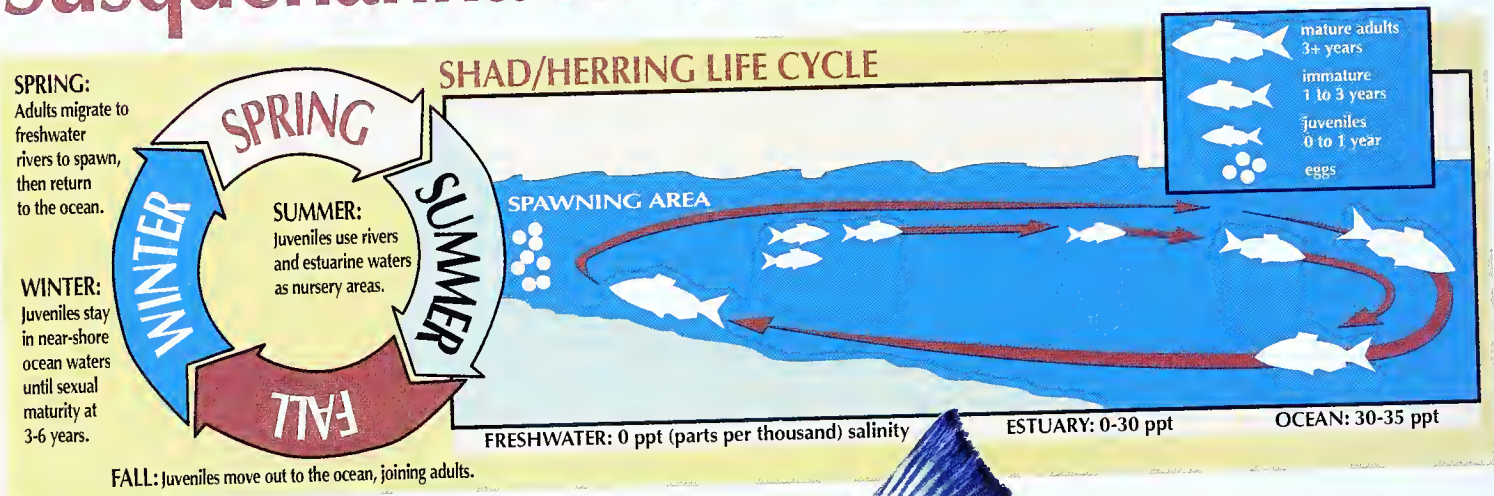


ORIGIN OF JUVENILE SHAD-SUSQUEHANNA RIVER



(continued on page 10)

Six Fishes Connecting the Susquehanna River with the Sea



American shad

Annual migrations of fish into the Susquehanna River include four species of the herring family, in addition to the striped bass and the American eel. The American shad is the largest herring in North America, and from the angler's perspective, the most important. The shad range includes the Atlantic Coast from northern Florida to southern Canada, and they also have been successfully introduced to the U.S. West Coast. Shad are relatively deep-bodied with a forked tail. They have a dusky spot behind the gill cover sometimes followed by several smaller spots on their silvery sides. They commonly reach a size of 18 to 24 inches and 4 to 6 pounds.

Like all anadromous fish, American shad spend most of their lives at sea and enter freshwater only to spawn. In mid-Atlantic states, spawning occurs in springtime, usually coinciding with the bloom of the dogwood. Once water temperatures warm to about 60 degrees, spawning occurs at night in relatively shallow but moving water. Unlike salmon and bass, which build nests to protect their eggs, the female shad releases 100,000 to 300,000 eggs directly into the water column. After fertilization, eggs slowly sink while drifting with the current until hatching takes place in 4 to 6 days.

Shad fry grow rapidly feeding on plankton and aquatic insects. The young shad live in their river nurseries for about six months, growing to about 4 to 6 inches. In the fall, cooler water temperatures trigger schools of juveniles to swim downriver to the ocean. Once in the open ocean, young shad join shad schools from other rivers and begin their seasonal migrations up and down the East Coast, from the mid-At-



lantic in winter to Canada's Bay of Fundy in summer. Shad live in the ocean until they mature in three to five years when they return to their rivers of birth to repeat the spawning cycle. Most shad die after spawning, but some may survive to return in future years.

Hickory shad

The relatively scarce hickory shad is intermediate in size between the American shad and the river herrings, commonly measuring 12 to 15 inches and weighing 1 to 2 pounds. Hickory shad range from the Carolinas to Long Island. They are distinguished from their herring and shad cousins by a protruding lower jaw and the presence of teeth, reflecting their preference to feed on fish instead of plankton.



illustrations-Chesapeake Bay Foundation



Alewife

One of the two river herrings, the anadromous alewife is a schooling species that spends most of its life at sea from North Carolina to Canada, returning to freshwater rivers and coastal ponds after three to five years to spawn. This species also occurs in the Great Lakes, and landlocked forms are commonly stocked as forage for game fish. Anadromous alewives are similar in appearance to the shad but are distinguished by the relatively large size of their eyes. They grow to about 10 to 12 inches, and although their life cycle is similar to that of the American shad, they prefer to spawn in smaller tributaries and slack water.



Blueback herring

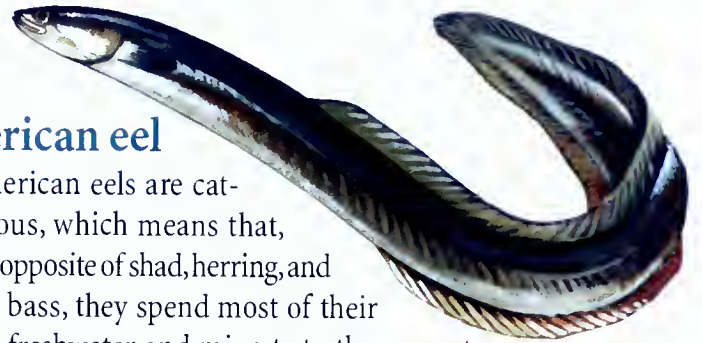
Blueback herring closely resemble the alewife in size and appearance. Because they are anadromous, they have a similar life cycle but may travel farther upstream into tributaries to spawn in swift waters. Their coastal distribution and spawning seasons coincide with those of American shad.



Striped bass

The striped bass is an important native Atlantic Coast sport and commercial species. Stripers, also known as rockfish in the Chesapeake Bay, may live for 30 years and reach great sizes with fish over 4 feet long and 50 pounds not uncommon. Stripers are shaped like other basses and are distinguished by the six or seven dark stripes that run the length of their bodies. Spawning occurs in springtime near the salt line of tidal tributaries, and significant numbers of smaller

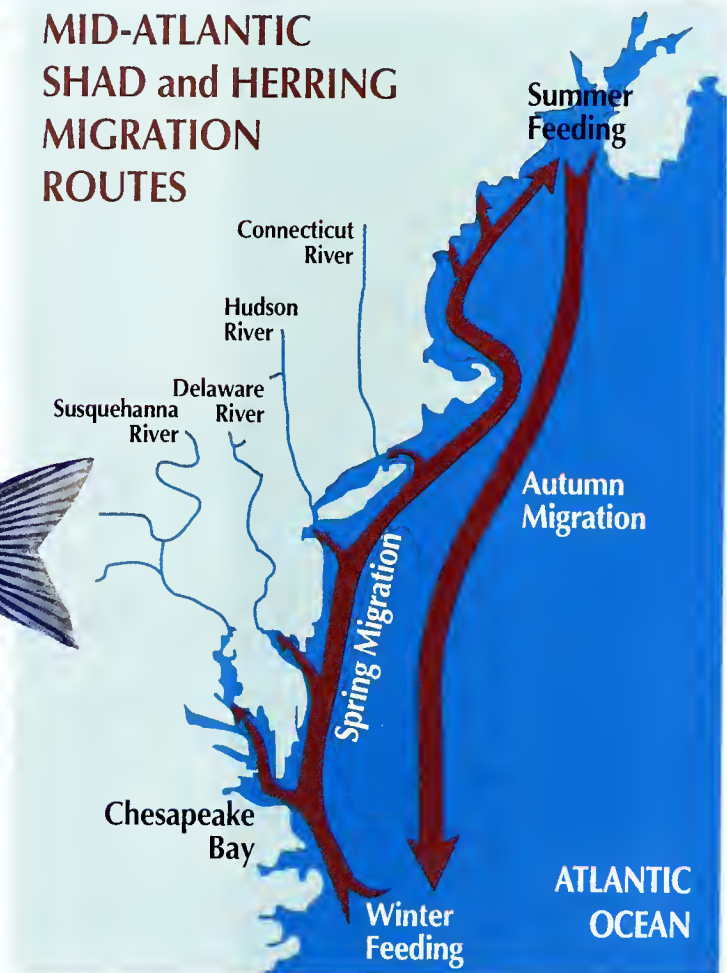
striped bass may ascend the Susquehanna River to feed during the summer. Following several years of tight restrictions on harvest and catch, striped bass populations have recovered from low levels recorded in the late 1970s.



American eel

American eels are catadromous, which means that, just the opposite of shad, herring, and striped bass, they spend most of their lives in freshwater and migrate to the ocean to spawn. The American eel is common in most rivers draining into the Atlantic Ocean. Once they mature in 10 to 15 years at a size of 2 to 3 feet, adult eels migrate downstream and return to a portion of the North Atlantic called the Sargasso Sea, where they spawn. Eel larvae drift with ocean currents for up to a year when they transform into a clear and then pigmented "elver" stage. Then they enter coastal streams in great numbers.

MID-ATLANTIC SHAD and HERRING MIGRATION ROUTES



of an inch long, and must avoid predation from minnows and other small fish. The rest of the life cycle of these hatchery-reared shad is the same as naturally spawned shad as described on page 8.

Monitoring the success of the natural reproduction and hatchery stocking begins in July as soon as juvenile shad are large enough to be collected with nets. Large 400-foot seines are used in the free-flowing sections of the river to collect specimens for otolith analysis (see the sidebar “Tetracycline Marking” on this page) and to monitor growth and abundance. Summer seine collections are augmented by fall collections at the hydroelectric dams using cast nets and lift nets to capture juveniles as they move downstream toward the ocean.

Evaluation of otoliths from collected sub-samples of juvenile shad demonstrates the success of the hatchery and the adult trap and transfer programs. As recently as 1990, hatchery fish made up 98 percent of all juvenile shad in summer and fall collections. As the numbers of spawning adults stocked upstream improved, the naturally produced fraction of the juvenile population increased to over 50 percent.

The catch of adult shad in the lifts at Conowingo increased markedly in recent years from an average of only 300 fish per year from 1972 to 1984 to over 60,000 in 1995. Otoliths are evaluated from representative samples from these adult collections each year, revealing that hatchery-marked fish

returning to the Susquehanna have contributed between 67 and 90 percent to the spawning runs.

Although it is well-proven that the hatchery program has been a key ingredient to the recovery of shad stocks in the Susquehanna River, it is recognized that culture and stocking is only a tool that we have used to “jump-start” the rebuilding process. True restoration ultimately depends on the ability of returning adult shad to successfully migrate upstream to spawn above dams, thus contributing to continued population growth for future generations. Success will ultimately be shown when we can safely discontinue the hatchery effort.

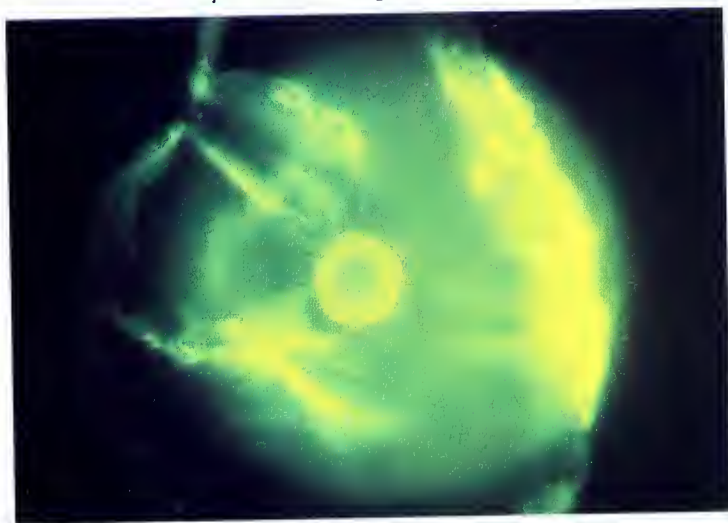
Tetracycline Marking

Developing methods to evaluate stocking progress has been a key to demonstrating that the restoration of shad will succeed. Because both naturally spawned and hatchery juvenile shad coexist in the upper river, a method for distinguishing the hatchery-reared fish had to be developed. Traditional tagging methods such as dart tags, jaw tags and fin clips would not work because shad fry are so tiny when released. Researchers modified a method developed at West Coast hatcheries to mark Pacific salmon. This method allows for mass-marking of large numbers of American shad fry.

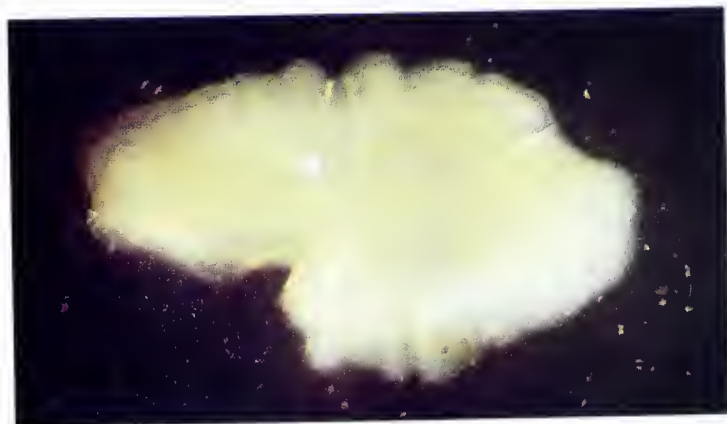
The mark is applied by adding tetracycline to the rearing tank, effectively immersing the fry in an antibiotic bath. The tetracycline is taken up by the fish and incorporated into growing bone tissue, specifically into the otoliths (earstones). The otoliths are disk-shaped bones found in the inner ear and serve in balance and hearing. Otoliths grow by laying down new calcium-bearing rings each day. The tetracycline present can be detected by examining a thin slice of otolith under a microscope using ultraviolet light and looking for the fluorescent-yellow glow that is produced by the antibiotic.

The same fish can be marked numerous times at intervals of several days. Varying the number of marks and the intervals produces distinct Morse code-like mark combinations, allowing many types of evaluations, including juvenile survival from different egg sources, stocking sites and times, and size or age of fish at release.

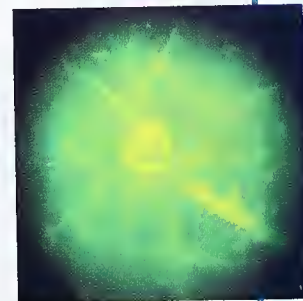
The shad tetracycline marking program on the Susquehanna River is the largest of its kind in the world. More than 115 million marked shad fry have been stocked since 1985.



Ultraviolet light reveals double otolith tetracycline mark.



Whole adult shad otolith with no tetracycline mark.





Reopening Susquehanna Tributaries

Construction of fish passage facilities at the three upstream Susquehanna River hydroelectric dams will provide migratory fish with access to hundreds of miles of the mainstem river by the year 2000. But many more miles of additional fish spawning habitat on tributary streams to the Susquehanna currently are blocked by dams and other obstructions. To prepare for the returning American shad and river herring, restoration efforts are now shifting to provide fish passage at blockages on tributary waters.

Impediments to fish migration can be found on nearly every stream in the Susquehanna River basin. Although shad and river herring are strong swimmers, they cannot jump over obstructions as do Pacific and Atlantic salmon. In fact, shad can be blocked by a structure only one foot high. Some

of these blockages occur naturally, such as debris dams that form around a tree when it falls into the water, and cataracts (waterfalls) that are part of the natural setting related to the underlying rock structure.

The most common manmade blockages are the small to mid-sized dams built to supply water for historic mills, industrial needs, municipal water systems, wildlife impoundments and recreational purposes. Where a road passes over a small tributary, the stream runs through a culvert that may act as a blockage. A gauging station weir, maintained by state and federal agencies on some tributaries, may also act as a blockage.

Pipe culvert dam, Pequea Creek, Lancaster County, PA.



*Fabridam, Susquehanna
River, Sunbury, PA.*

The Chesapeake Bay Program has funded a project by the Pennsylvania Fish and Boat Commission to locate dams and other impediments to fish migration on the tributaries to the Susquehanna and to determine the restoration potential of upstream habitat. The Pennsylvania State University Cooperative Fish and Wildlife Research Unit is conducting the inventory. Researchers have already identified hundreds of blockages, many privately owned, on major tributaries below the confluence of the Juniata and Susquehanna rivers.

The inventory will be used to establish a list for future fish passage projects. With so many to choose from, priority will be placed on blockages having a larger area of valuable habitat available upstream and those located closer to the Chesapeake Bay.

Once a blockage is targeted, the Pennsylvania Fish and Boat Commission works with the owner to determine the best and most cost-effective solution to providing fish passage. The Chesapeake Bay Program provides some funds for selected projects on a 1:1 matching basis with non-federal dollars spent on migratory fish restoration. In addition, any owner wishing to make structural modifications to a dam is required to provide fish passage as part of the permitting requirements. Owners of hydroelectric dams are required to provide fish passage as part of their Federal Energy Regulatory Commission licensing requirements once migratory fishes are present at the base of their dams.

The objective of fish passage is to provide a gentle slope or gradient and reduced water velocity so that upstream navigation is within the fish's physical capability. The simplest



New Dams

In addition to blocking fish migrations, dams destroy the natural free-flowing character of streams and degrade upriver habitat by trapping sediments and nutrients. Most dams were constructed at a time before stream ecology and the adverse effects of dams were understood. Therefore, some dams may no longer serve a useful purpose and should be removed. Proposals for new dams must consider the need for fish passage and the effects dams would have on stream ecology.

and best method to provide fish passage is to remove all or part of the obstruction. For a low-head dam, this may involve creating an opening or notch (breaching) or its removal. Removing a dam is often the better option because it restores the natural free-flowing condition of the stream as well as

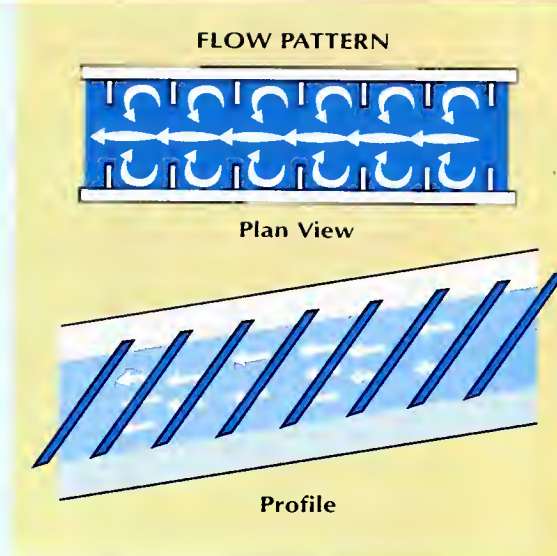
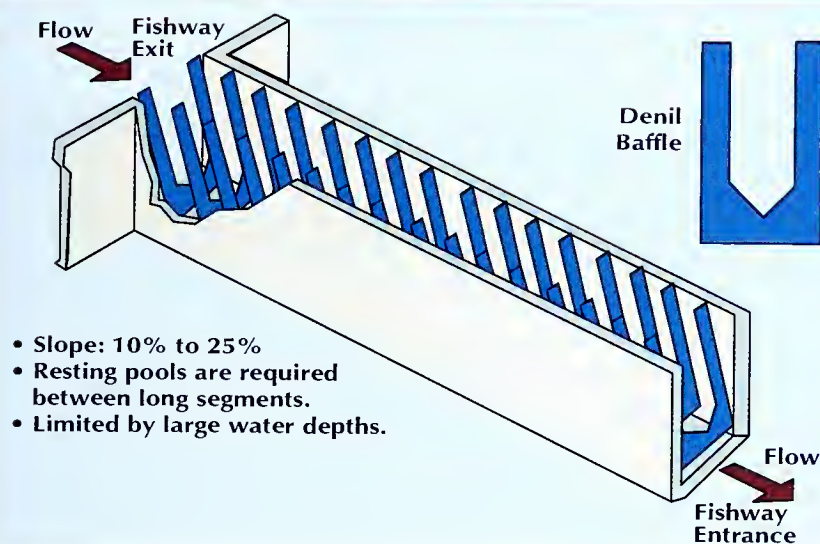
permitting fish passage. Other structures such as culverts and gauging stations can be redesigned to provide the necessary gradient and flow for fish passage.

Another often more expensive solution is to construct fishways (commonly called "ladders") to allow fish to pass over or around an obstruction. Fishway designs are unique to the type and size of the blockage, the number of fish they will pass (based on available upstream habitat), and the fluctuations in stream flow.



Low-head dam, Conestoga River, Lancaster County, PA.

DENIL FISHWAY



There are three types of fishways used in Pennsylvania: Vertical slot, Denil and mechanical lifts. Vertical slot and Denil fishways are passive flume-like (inclined water chute) structures equipped with a series of baffles or weirs that



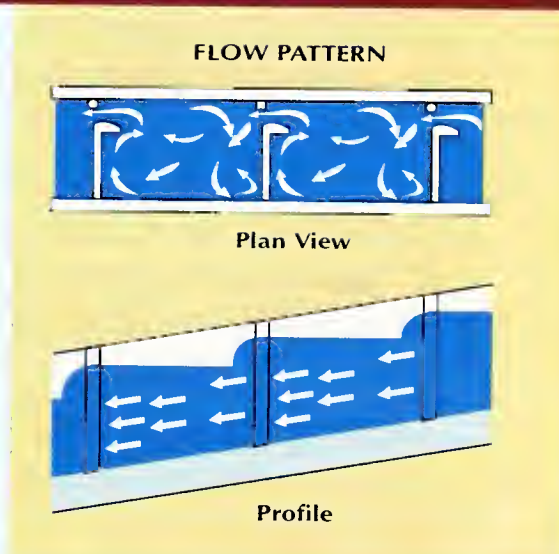
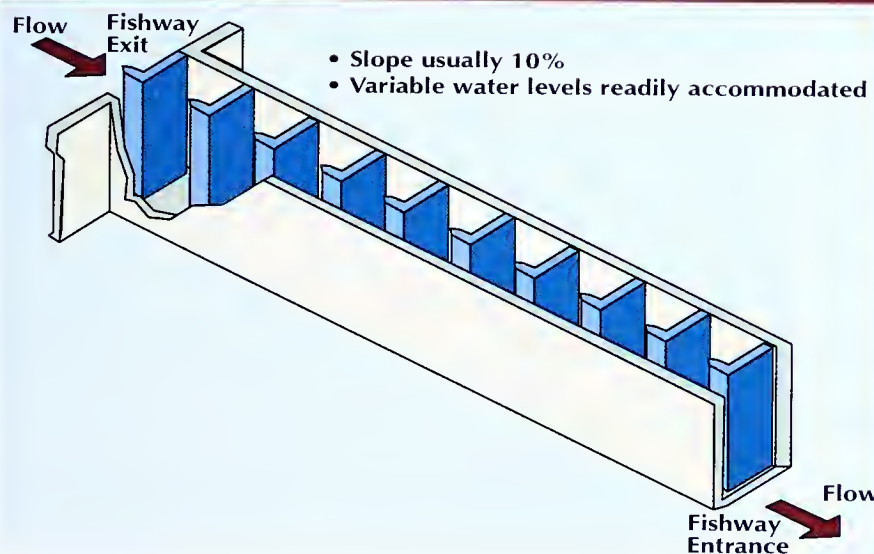
interrupt the flow of water, creating a series of ascending pools. They reduce the water's velocity to a level that fish can navigate.

The fish negotiate a ladder—at their own pace—just as they would negotiate natural rapids.

Denil fishways are used at dams on small to medium-sized rivers with relatively consistent flows. They are designed to pass small populations of shad and herring. George Denil was a Belgian engineer who invented this design in 1908. Vertical slot fishways are used at dams on medium- to large-sized rivers that characteristically have dramatic flow fluctuations. They are designed to pass large populations of shad and river herring.

The third type of fish passage is a mechanical lift, or elevator, such as those used at the high hydroelectric dam on the lower Susquehanna River (see diagram on page 5). Attraction flows draw fish into a pool area equipped with a large hopper. At predetermined intervals, a gate is used to crowd the fish into a confined area. The fish are collected in the hopper and lifted to an exit channel on the top of the dam. Once in this channel, they swim out and proceed up river.

VERTICAL SLOT FISHWAY





The Chesapeake Connection



Shad and other anadromous fish face unbelievable odds and incredible journeys in their migration from the ocean through the Chesapeake Bay upstream to the rivers of their birth to complete their spawning ritual. The endurance of these fish and the force of their instinctive drive captures the human imagination. These creatures engender wide-ranging appeal for food and sport. Their life cycles, which take them such great distances across so many political boundaries, clearly define the connection of local waterways to the Chesapeake Bay, and ultimately, to the Atlantic Ocean.

Recognizing the importance of the upstream waters to the health of the Bay's anadromous fish population and fishing industry, partners in the Bay program signed an agreement to initiate management plans for "commercially, recreationally, and ecologically valuable species," which include the American shad. This 1987 Chesapeake Bay Agreement, made by Maryland, Pennsylvania, Virginia, the District of Columbia, the U.S. Environmental Protection Agency and the Chesapeake Bay Commission, pledges to provide for fish passage at dams, and remove stream blockages whenever necessary to restore a natural passage for migratory fish.

Such a commitment is vital to the success of shad restoration efforts. However, restoring shad involves more than

just removing physical obstacles. We also need to improve the water quality, and spawning and nursery habitat in the Susquehanna River basin and other Bay tributaries, and to support the regulation of fisheries.

Anadromous fish need miles and miles of clean, fresh water to spawn and thrive during the early phases of their life cycle. Shad prefer clear, moving water free of excess nutrients and sediment, and free of pollution from heavy metals, toxics, acid mine drainage and other contaminants.

Excess amounts of nutrients, like nitrogen and phosphorus, cause a form of pollution. They can degrade significant stretches of otherwise good river habitat by causing overgrowths of algae. Dead and decaying algae deplete the dissolved oxygen in the water, stressing the aquatic organisms living there. Sediment and siltation can also destroy spawning grounds. Excess sediment blocks sunlight, covers fish eggs and bottom-dwelling invertebrates, clogs fish gills, and creates other unfavorable conditions for many aquatic organisms.

Sources of nutrient and sediment pollution include untreated human sewage, automobile exhaust, runoff from streets, driveways, yards and farms (especially when fertilizer is applied too heavily or during slow-growth cycles when

plants will not take it up), and erosion along streambanks, and from construction, logging or mining sites. Many of our daily activities affect the quality and quantity of habitat available to other species, from the aquatic insects near the base of the food web to the organisms that feed on them, to the widely valued American shad.

The kinds of measures necessary to protect and improve water quality for migratory fishes—reduction of nutrients, sediment, and other pollutants in tributary streams, and the maintenance of riparian (streamside) buffers—also are important to the Chesapeake Bay. The Chesapeake Bay Program, which provides the overall framework for the many states working together in Bay restoration efforts, has a goal of reducing the amount of nitrogen and phosphorus that reaches the Chesapeake by 40 percent by the turn of the century.

To meet its 40 percent reduction goal, Pennsylvania is relying heavily on reducing nutrient and sediment pollution from agriculture by promoting and cost-sharing best management practices (BMPs), and through the implementation of Pennsylvania's Nutrient Management Act. BMPs include the appropriate timing, rate and method of fertilizer application, use of runoff controls such as streambank fencing, and proper handling of animal waste. Some of these concepts can also be applied to homeowner yard-care management practices.

Pennsylvania also is evaluating the importance of restoring and maintaining forested buffer zones as part of its strategy to remove nutrients. Trees, especially riparian forests (woodlands that border waterways), seem to have a natural ability to remove nitrogen. A number of recent studies indicate that, at least in some areas, forests can be one of the most effective ways to trap sediment and remove nutrients from surface runoff and shallow ground water. The Susquehanna watershed was, historically, a forest environment.

What Can You Do?

- Support shad and herring restoration objectives, including fish passageways.
- Support removal of obsolete dams and oppose construction of non-essential dams.
- Fight for clean water and air initiatives.
- Support Bay Program nutrient reduction strategies.
- Encourage your agricultural community to implement BMPs.
- Maintain riparian forest buffer areas.
- Help educate others about clean water and migratory fish.

Back to the future

Salt, maple sugar, cider, whiskey, leather, iron, grain and whetstones are just a few of the many commodities traded for American shad during the heyday of shad fishing on the Susquehanna River. For most of this century, Pennsylvanians have lived without the benefits of Susquehanna shad runs. As a result, shad and their heritage have been largely forgotten.

Through persistence and a few key successes in recent years, the return of shad to the Susquehanna now seems possible. Development of fish passage and shad hatchery technologies combined with the cooperative work of state and federal agencies, utilities and private citizens promises to rebuild the runs. In the next decade or two, hundreds of thousands of anglers will enjoy shad fishing on the Susquehanna.

The potential economic, recreational and ecological values of American shad and related species provide a compelling argument for their restoration in the Susquehanna's waters, bringing them back to their historical abundance.



Anadromous fish need miles and miles of clean, fresh water to spawn and thrive during the early phases of their life cycle. Shad prefer clear, moving water free of excess nutrients and sediment, and free of pollution from heavy metals, toxics, acid mine drainage and other contaminants.



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**Pennsylvania Fish
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**Alliance for
the Chesapeake Bay**

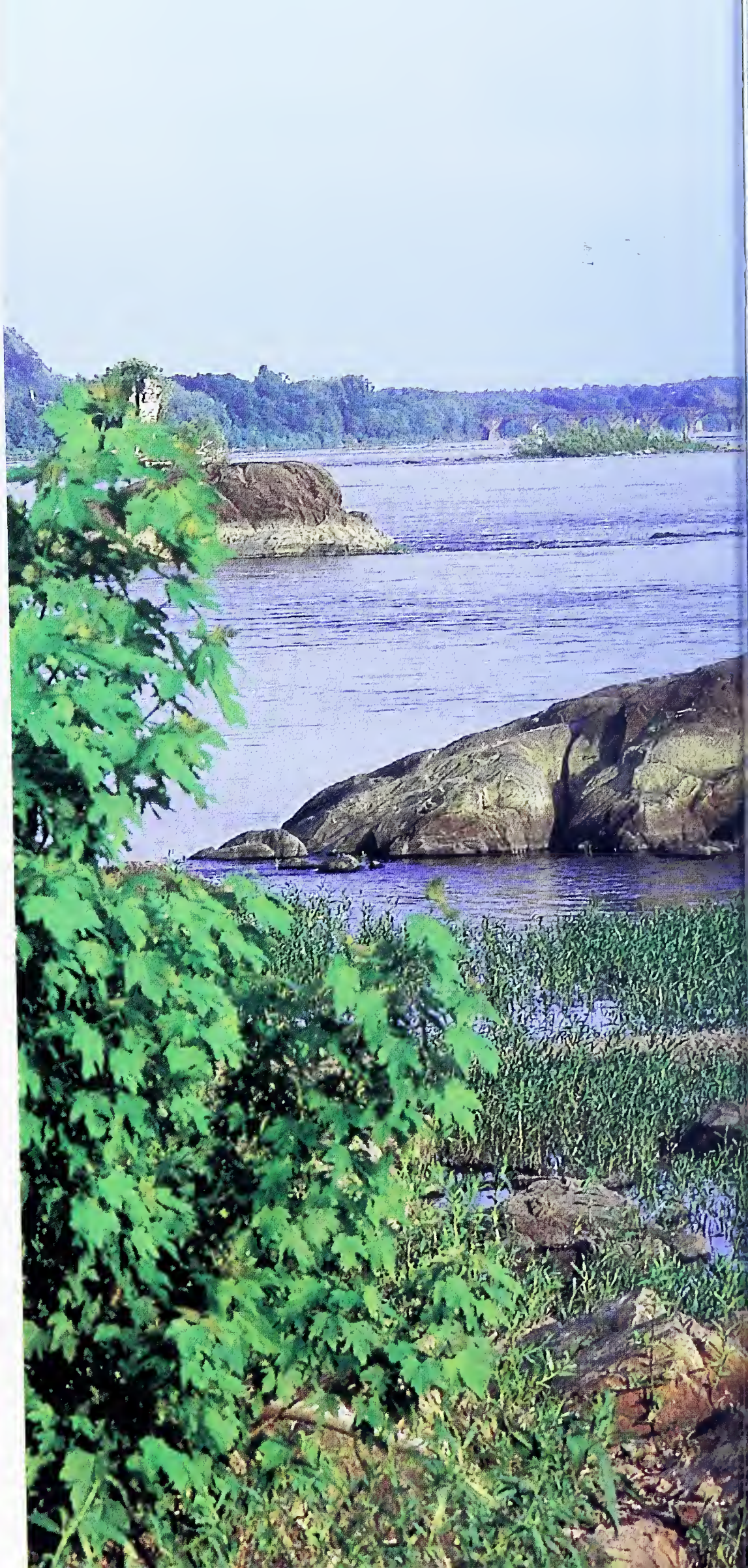
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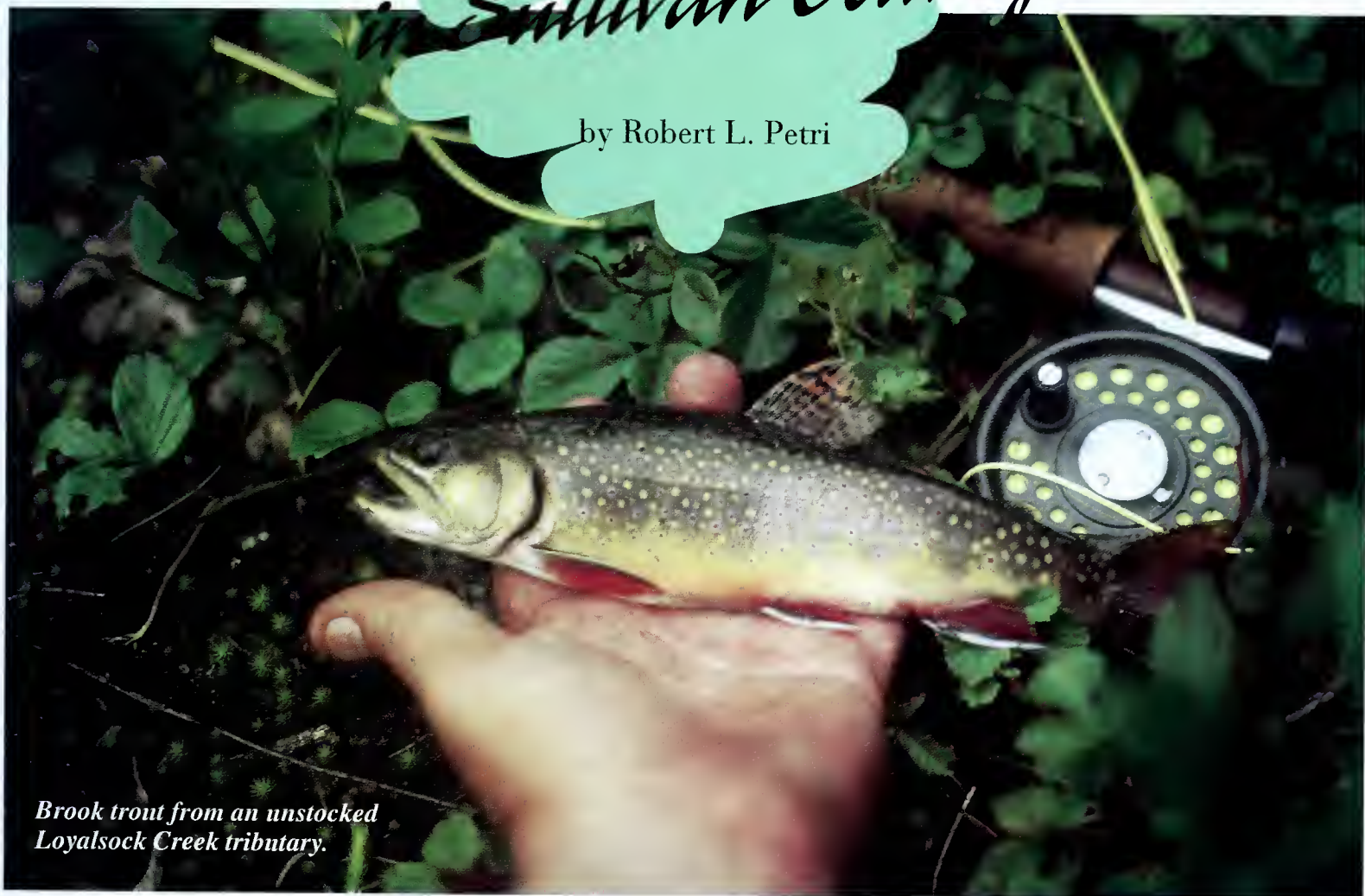
**Chesapeake Regional
Information Service**

1-800-662-CRIS



Trout Fishing in Sullivan County

by Robert L. Petri



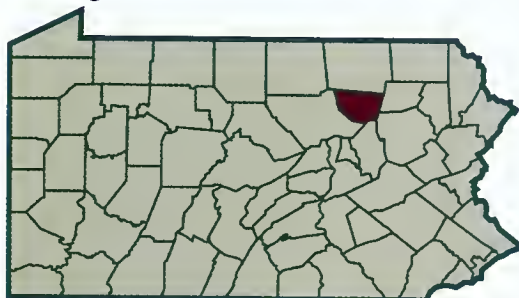
Brook trout from an unstocked Loyalsock Creek tributary.

In the rolling mountains of northcentral Pennsylvania, in the land that lies north of the great forks of the Susquehanna River, is one of the true scenic jewels of our state: Sullivan County.

At 451 square miles of land area, this is one of Pennsylvania's smaller counties, especially when contrasted with some of its massive neighbors to the west like Tioga and Lycoming counties. But there is much of what is wonderful about Pennsylvania packed into this small space. In no area of measurement are these words more true than when they are applied to the excellent trout fishing opportunities to be found here. From the broad, sparkling flats of Loyalsock Creek to the more intimate confines of the smaller stocked trout waters of the area, to the almost numberless small brook trout waters that lace the county, there is something here for just about every trout fishing preference.

The Loyalsock

Just as Cameron County is defined by the Driftwood Branch and Tioga County by Pine Creek, Sullivan County is dominated by one of Pennsylvania's best-loved trout streams, the Loyalsock. The "Sock" carves a southwesterly path throughout the county, alternately flowing through roadless wilderness and along the major highways of the region. In the Loyalsock's runs and pools and in its many cold, clean tributaries waits some of the best trout fishing in the state.

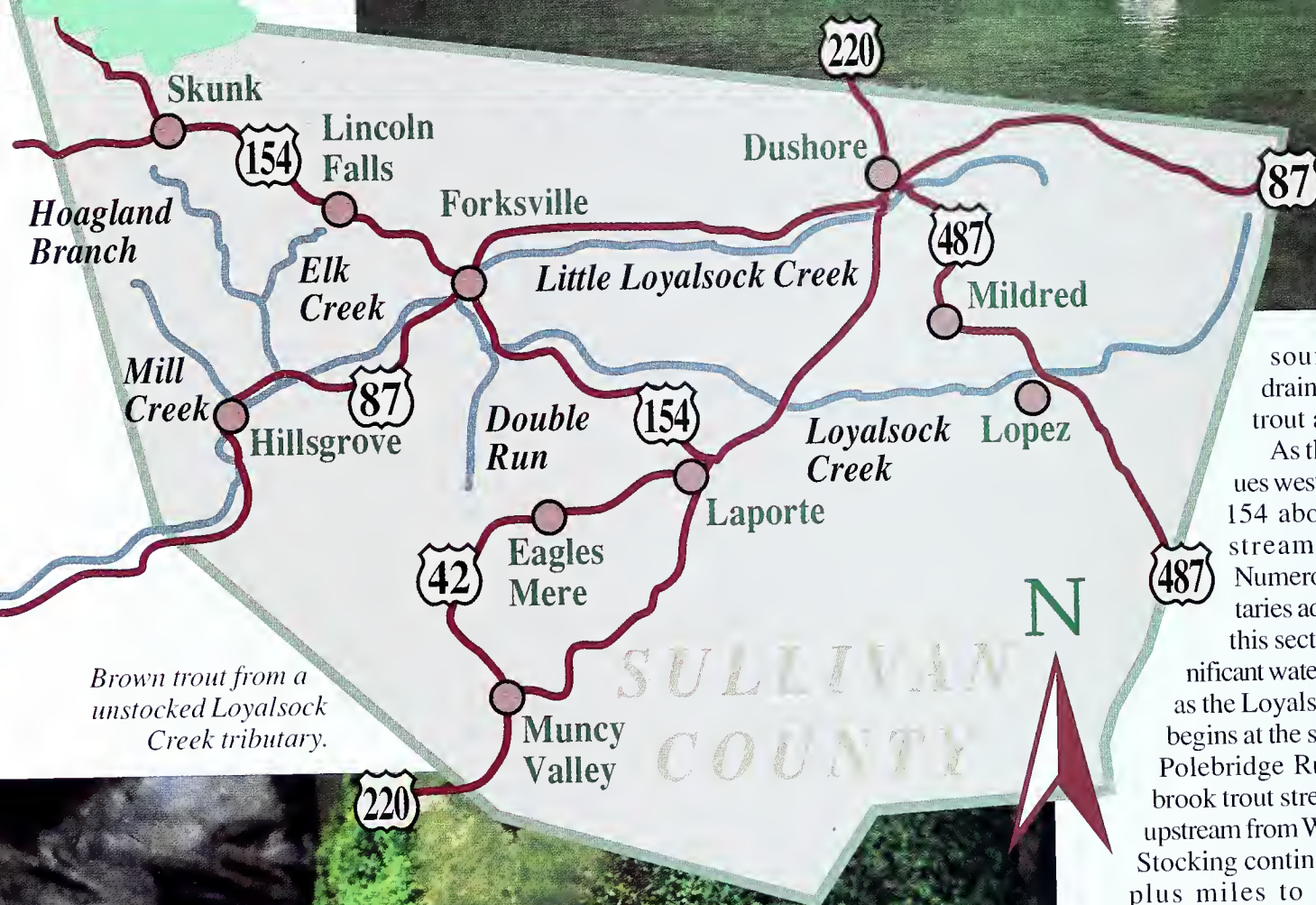


The Loyalsock is a large trout stream by Pennsylvania standards. It rises in the swampy terrain near the village of Lopez along PA Route 487, not far from the Sullivan/Wyoming County line, and begins its trek westward, gaining numerous small tributaries and respectable size as it goes.

These upper reaches have a reputation as some of the finest kayaking waters in the east, and each spring, hundreds of whitewater enthusiasts test the turbulent runs and chutes of the upper Loyalsock below Lopez. Unfortunately, this excellence does not extend to the water quality in the upper Loyalsock basin. Commission Area 3 Fisheries Manager Bruce Hollender notes that there are problems in this section of the stream with low pH, primarily caused by the natural acidity of the soils of the upper Loyalsock basin, and the residual effects of scattered

*Delayed-Harvest
area, Loyalsock
Creek near the
Sullivan/Lycoming
County line.*

Trout Fishing in Sullivan County



*Brown trout from a
unstocked Loyalsock
Creek tributary.*



sources of acid mine drainage. As a result, few trout are found here.

As the Loyalsock continues west, it parallels PA Route 154 about seven miles upstream from Forksville. Numerous small, clean tributaries add their flows through this section and allow for significant water quality improvement as the Loyalsock grows. Stocking begins at the stream's junction with Polebridge Run, a small, stocked brook trout stream about three miles upstream from World's End State Park. Stocking continues over the next 30-plus miles to Loyalsockville in Lycoming County.

The first seven miles of stocked water on the Loyalsock, from Pole Bridge Run downstream to Forksville, are one of the most beautiful pieces of trout water in the Commonwealth. The stream cuts its way through a steep gorge, twisting and turning through a series of long rapids and rock-studded pools. This entire section of the stream is paralleled by PA Route 154, and access is generally good, especially throughout the middle reaches of this section where the Loyalsock flows through the confines of World's End State Park.

At Forksville, the Loyalsock grows with the addition of the waters of the Little Loyalsock, which enters from the northeast. The Little Loyalsock offers 10 miles of stocked trout water flowing through a wide valley of farms and woodlots. Stocking

begins at the mouth and extends upstream to the vicinity of the village of Dushore. There are fewer points of access here, as most of the stream flows through private land, some of which is posted. However, there is also much open water on the Little Loyalsock, and you should have little trouble finding a place to fish. Many of the open sections of the Little Loyalsock are marked with signs reading: "Fishing Permitted, Walk In Only." Watch for the signs and return the courtesy of the landowner by not littering or blocking driveways with your vehicle.

Below Forksville, a larger, stronger Loyalsock continues southwesterly toward the Lycoming County line. This is big water by Pennsylvania standards, averaging well over 150 feet wide in many sections. Long, placid pools alternate with shorter sections of riffle and pocket water to provide a variety of water types.

PA Route 87 parallels the "Sock" through the balance of its Sullivan County section and on into Lycoming County. The highway follows the south bank of the stream over most of this section, with the exception of a short stretch between the mouth of Elk Creek and the village of Hillsgrove where the road switches to the north bank. Access to this section of the Loyalsock remains good, but often requires a little walking, as portions of the stream flow a good distance away from the road. In the early season, when fishing pressure is at its peak, you can use this situation to your advantage. Most anglers opt for the easier access settings, and you can avoid the crowds by reaching the stream where a little more effort is required.

A 1.4-mile delayed-harvest, artificial-lures-only area begins on the Loyalsock at the Sullivan/Lycoming County line. Area Fisheries Manager Hollender describes this section of the stream as good early to mid-season holding water, and the prevailing regulations ensure that good numbers of trout can be found here well into June. As summer water temperatures rise, many of the trout in the Loyalsock project go looking for cooler water and can be found around the mouth of tributary streams.

From the broad, sparkling flats of Loyalsock Creek to the more intimate confines of the smaller stocked trout waters of the area, to the almost numberless small brook trout waters that lace the county, there is something here for just about every trout fishing preference.

Access to the Loyalsock project is provided by a number of pull-offs along PA Route 87 just west or downstream from the Lycoming County line. The best access to the lower section of the project is provided by a Tiadaghton State Forest Nature Trail parking area at Sandy Bottom. A small sign along Route 87 marks the short dirt spur road that leads to the parking area.

Elk Creek, Hoagland Branch

Even though the Loyalsock is the major stream of Sullivan County, it far from tells the whole angling story in the area. For the angler who prefers small to medium water, several of the Loyalsock tribs offer excellent fishing all through the season. Perhaps the best of these waters are Elk Creek and its ledgerrock tributary, the Hoagland Branch.

Elk Creek joins the Loyalsock a few miles upstream from the village of Hillsgrove along Route 87. It is a moderate-sized waterway that flows through a valley of mixed farms and woodlots. Trout are stocked here pre-season and at least once during May over the bottom four miles of the stream from the mouth up to Lincoln Falls along Route 154. A fair to good population of wild brook and brown trout is also present in the stream.

During normal flows, Elk Creek has fairly long reaches of flat, shallow water without much good holding water for trout, particularly in the lower sections immediately upstream from the junction with the Loyalsock. However, where there is adequate cover, there will also be trout.

Access to the stocked section of Elk Creek is via SR4001, which splits off from Route 87 near Elk Creek's junction with the "Sock" and follows the stream up to

Lincoln Falls. All of Elk Creek flows through privately held lands, so be sure to ask permission to fish where applicable and respect the rights of the property owner.

The Hoagland Branch joins Elk Creek about two miles upstream from the Loyalsock junction. This is perhaps the most scenic of the smaller stocked streams in Sullivan County.

There are abundant plunge pools, several small waterfalls and a streambed littered with huge boulders here as the stream clips along sheer, rocky cliffs through a dense forest.

The Hoagland Branch is stocked from the mouth upstream approximately four miles, and also holds respectable numbers of wild trout, primarily browns. Even though there is scattered posting in the extreme lower sections of the stream, the majority of the stocked section of the Hoagland Branch flows through a portion of Wyoming State Forest. A state forest road closely parallels the stream over its entire length, offering easy access. A dense canopy of trees helps keep the stream cool all season long, and the Hoagland Branch is an excellent destination later in the season when the lower sections of Elk Creek and the main stem of the Loyalsock have become too warm for good fishing.

Mill Creek

Mill Creek is another beautiful stocked tributary of the Loyalsock that enters the main stream right in the village of Hillsgrove along PA Route 87. The Mill Creek Road follows the stream up into the Wyoming State Forest to provide access. As the road travels the high ridge along the Mill Creek valley, a short hike is usually necessary to get to the stream. It's well worth your while, however, because this stream rivals the Hoagland Branch for fine scenery.

Mill Creek is stocked from the mouth upstream for about three miles to the bridge on Big Hollow Road. In addition to the stocked trout, Mill Creek also holds a fair number of native fish.

In World's End State Park lies the small

Worms, minnows and more offbeat baits like live crayfish and caddis larvae all produce some fish, as spinners in sizes 1 and 0 and small crankbaits and jigs.

The early season Loyalsock angler will do best by concentrating on the slower, deeper sections of the stream. A well-placed crawler or minnow drifted through the slower sections can be productive early in the season.

but beautiful Double Run, perhaps the smallest of the stocked Loyalsock tributaries. Averaging about 10 feet wide in most places, Double Run almost literally falls off the steep ridge to meet the Loyalsock. This very high gradient by Pennsylvania standards provides for numerous small waterfalls and chutes that hold stocked and native brook trout. Access is via Route 154 about five miles upstream from Forksville.

Small, unstocked waters

In addition to the stocked tribs of the Loyalsock, Sullivan County is laced by an abundance of small, unstocked waters where native brookies and some brown trout can be found. Among the best of these are Shanersburg Run in the upper Loyalsock watershed a few miles upstream from World's End State Park along Route 154, the state forest sections of Ogdonia Creek and Kettle Creek off Route 87 a few miles downstream from Hillsgrove and the headwaters branches of Mill Creek at Hillsgrove. Portions of all these waters are on public land and all offer decent fishing over populations of small wild trout.

Remember that our wild trout resource is a fragile commodity. Please make a point of releasing as much of your catch as possible when fishing these small, unstocked waters.

Tactics, techniques

Tactics and techniques that bring success on the trout waters of Sullivan County vary with the time of year and the water you are fishing. The Loyalsock provides its best angling from opening day until approximately mid-June when water temperatures begin to exceed the comfort limits of trout.

The early season Loyalsock angler will do best by concentrating on the slower, deeper sections of the stream. Trout are sluggish in the cold waters of April. They lie in places where they do not need to expend a lot of energy to hold in the flow. A well-placed crawler or minnow drifted through the slower sections can be productive early in the season. Spinners and other small lures worked slowly and deeply also take fish.

As April gives way to the warmer days of May, the Loyalsock trout move out of the pools, and into the numerous pockets and other sections of broken water that can be found all along the stream. At these times, pay attention to places like the back side of instream boulders and the slower flows along the rocky banks. The trout set up housekeeping in these places, and use them as points from which to dart out into the current and ambush drifting food items.

A variety of live baits still works well during the warmer days of May, as do small lures and jigs. Just be sure to get a good "read" on the water and concentrate on the places where breaks in the flow produce resting places for the trout.

May is also the prime time for the fly angler on the Loyalsock. The stream does not produce exceptionally heavy mayfly hatches, but does have good numbers of sulphurs, gray foxes and march browns, and numerous species of caddises. The most consistent mayfly hatch in the watershed is the Isonychia, or slate drake, which begins around Memorial Day and continues through most of June. Working the faster sections of the stream with a size 12 Isonychia Nymph can be very productive at these times.

Spring comes grudgingly to the northcentral mountains of PA, and early in the season the Loyalsock is often still high and very cold from runoff. Remember that the main Loyalsock is large water, as much a river as it is a creek. At these levels, the stream can be dangerous, and you may want to switch destinations to a smaller waterway like the Little Loyalsock or Elk Creek, where wading is easier.

The Loyalsock tribs like upper Elk Creek, the Hoagland Branch and Mill Creek all offer good early season angling, but really come into their own a little later in the season after the runoff is finished and the spring sun has had a chance to bring a little warmth to the water. All these waters remain fishable and well worth your time all summer long and well into autumn.

The key to success on these smaller streams is the same as on similar waters across the state. All these streams are less

fertile than the main Loyalsock, and as a result, the resident trout are more opportunistic feeders. Remember that in these more intimate confines, trout spook easily, especially as summer brings lower water levels. Your approach to the stream can be just as important as what is on the end of your line, if not more so.

Worms, minnows and more offbeat baits like live crayfish and caddis larvae all produce some fish, as do spinners in sizes 1 and 0 and small crankbaits and jigs. Just remember to keep out of sight of the trout and make careful approaches as you work the water.

Late spring and summer bring excellent fly fishing on the smaller Sullivan County streams. High-floating attractor-type dry flies like the Humpy and Elk Hair Caddis in sizes 12 through 16 are great choices for prospecting the runs and pools of the Hoagland Branch, Mill Creek and others. Such generic nymph patterns as the Hare's Ear and Pheasant Tail in similar sizes also produce many fish.

If there is a problem with the trout fishing available in Sullivan County, it has to do with variety and where to go. From the wide expanses of the Loyalsock to the deep woods that frame the banks of Mill Creek at Hillsgrove, to the beautiful scenery to be found along many of the smaller, unstocked streams of the county, the possibilities border on the limitless. All our problems should be such a delight to solve.



Traveling Light

Exploring one of Pennsylvania's smaller trout waters can mean covering a lot of ground (and water) during the course of a day. The small streams of Sullivan County are no exception to this rule. You can make the day more enjoyable by carrying only what you need with you.

Give some thought to the time of year and the water conditions you expect and then adjust the contents of your fishing vest or pack accordingly. Leave those extra boxes of lures or flies in the car. Anything you usually carry "just in case" can also probably be left behind. Of course, this doesn't apply to emergency items such as first aid kits and the like.

The chances that your success will be lessened by traveling a little lighter are slight, and once you get back to the car, you will feel more like driving on to the next stream and less like taking a nap.—
RLP.



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GOING, GOING, GONE!

Hawk Mountain: *Fishing the Flight Path*

by Vic Attardo

Each year thousands of bird lovers flock to Hawk Mountain to witness the annual migration of raptors and other feathered travelers cruising along the Blue Mountains and Kittatinny Ridge.

A popular tourist spot, the Hawk Mountain Sanctuary, east of Dreherstown, can host as many human visitors in the spring and fall as it does itinerant birds. If you plan to visit the sanctuary, carry your birder's field guide and most certainly your binoculars.

But if you're like me, and like to mix in a little fish-catching along with your bird-watching, then in addition to your guide book and 10 X 35 glasses, make sure to tote your 6-foot spinning and 9-foot fly rods on the trip. For the area around Hawk Mountain—say, just 10 miles as the raptor flies—has a wealth of angling opportunities where anyone can combine fins with feathers. Everything from brown trout to smallmouth bass, from largemouths to channel catfish, and from sunnies to brook trout can be caught in the streams, ponds and rivers that surround the Hawk Mountain summit.

Located near the corners of three counties—Lehigh, Berks and Schuylkill—the slopes of Hawk Mountain feed a number of waterways with a nearly steady stream of fresh water. Hemlock Heights, Owls Head, The Cobble and other surrounding peaks contribute a cold flow to the rivulets and springs that fuel the likes



of Pine Creek, Maiden Creek, Rattling Run, the Little Schuylkill River and even the main Schuylkill. On both sides of the Kittatinny Ridge anglers can find twisting streams holding wild browns and brook trout or fast-flowing rivers with excitable smallmouths and panfish.

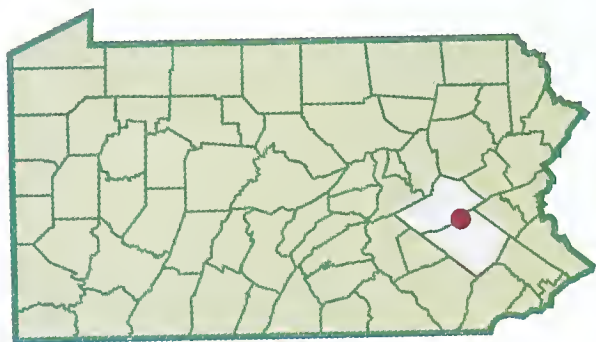
On a one-day trip I took in early March with fishing partner Chaz McDonald, we hooked and released some holdover browns in one tributary, wild brookies in another stream, river smallmouths and panfish beside a charming village and finally a largemouth bass or two in a public pond. We were tired and hungry by the end of the day, but we couldn't believe the variety of fish we had managed to catch or the scenery we had enjoyed—let alone the birds we'd seen through our binoculars. In trip after trip I've come to realize that

Hawk Mountain can provide good fishing both for the discriminating fly rodder who seeks the challenge of catching wary trout, or for the family that wants to cast a worm-laden hook for not so discriminating panfish. Around Hawk Mountain, it's your choice.

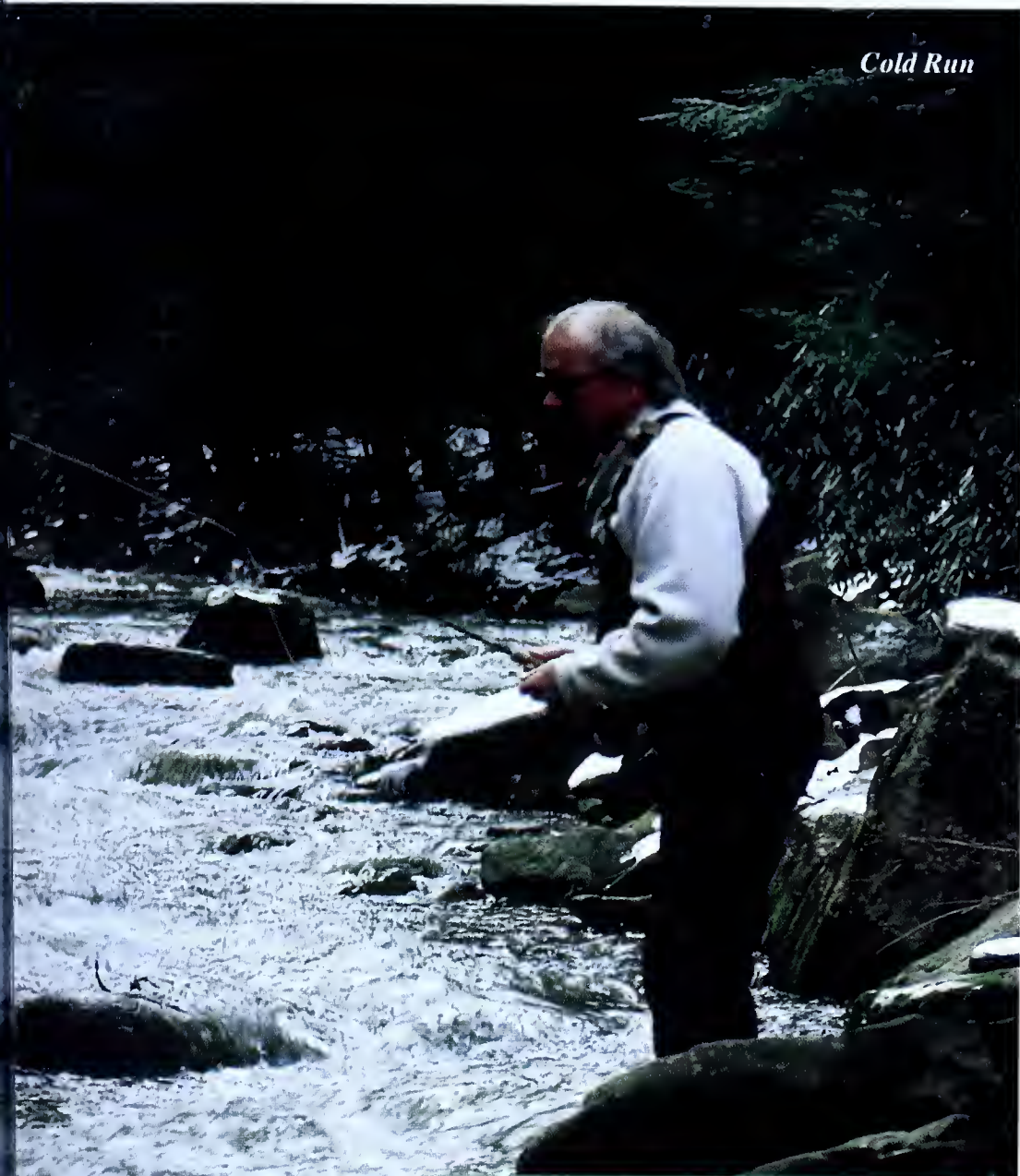
Where to go

It's hard to say exactly where one should begin locating the fishable spots around the mountain, so for the sake of the casual angler let's start with the more accessible locations and the "easier" fish.

Our first stop is the town of Port Clinton and the confluence of the Little Schuylkill River and the main Schuylkill on Route 61. The little "S" enters the big "S" beneath a railroad bridge and a rocky point. There are stories about some big trout



Cold Run



caught in this area, but for my money it's not the species one should target.

Instead, the rivers' juncture is the home of smallmouth bass, redbreast sunfish and rock bass and there are plenty of these hungry fish ready to snap at your lures where the two rivers meet. The main Schuylkill here is actually very narrow, no more than 50 to 60 feet across. It contains a number of rocky runs and riffles that smallmouths love to inhabit. I've found that the short-jawed bass will fall to small spinners danced along the current and to a variety of live bait and flies.

At the south end of the village is a ballfield where you can watch a Little League game and fish for smallies at the same time. As a lover of grassy diamonds, that idea really appeals to me.

From the park, the Port of Clinton Canal Trail heads upriver opposite the railroad tracks. All of this is good smallmouth water, but be careful—the rocks are covered with silt and can be very slippery.

If you don't like the cheering from the ballgame you can follow the trail to the west and find plenty of peace and quiet, except when a train passes through.

The locals say that catfishing in the main river is excellent during the summer and the fish sometimes hit on every cast. A Little League father said his son caught a cattie over 20 inches a year or two back.

Another way to gain access to some pretty secluded spots on the big Schuylkill

Everything from brown trout to smallmouth bass, from largemouths to channel catfish, and from sunnies to brook trout can be caught in the streams, ponds and rivers that surround the Hawk Mountain summit.



The Hawk Mountain area is laced with a variety of fishing opportunities.

Hawk Mountain: Fishing the Flight Path

is through the town of Hamburg. From Route 22 turn south on North Fourth Street to Port Clinton Avenue. Then turn right on the avenue that follows the river all the way to Port Clinton.

There is a major dam about halfway between Hamburg and Port Clinton. Some good smallmouth water is situated below the dam, but the river in this area is much wider and faster and may not be suitable for a young family.

Above the dam you'll find a deep impoundment. A boat launch lies on the east side of the river and is accessible off Route 61 north of Hamburg.

If you've brought the family to Hawk Mountain, they may not be interested in fording the bramble-covered streams I'll describe in a few paragraphs, but they probably would go for a more sedate experience, and the area offers just that.

Down the southwest side of the mountain there is an unmarked paved road just before you get to the bridge that crosses the Little Schuylkill River and Route 895 at Dreherstown. Take a left on this unnamed road—it's actually a "Y" but you can't tell that coming down the mountain—and follow the road nearly to its end. There you'll discover two small ponds on State Game Lands 106 that will have the kids shouting with glee.

I've never been able to find a name for these ponds on any map, nor are they

marked with anything except the gamelands number, so I simply call them the Twin Ponds at Dreherstown. In any case, they are filled with sunnies and bass and domesticated ducks—in short, all the things that kids love. Even though most of the bass are shorties, my largest fish

caught from these ponds weighed over three pounds and was captured on a stormy June evening with a black Woolly Bugger.

The pond on the right is the larger of the two and as such gets most of the fishing pressure. Nevertheless, a bobber and a worm tossed from the wooded shoreline will receive the pecking strikes of bluegills and pumpkinseeds. Those seeking more of a challenge can cast spinnerbaits and plastic worms into the pond's deeper holes and hope for a strike from Mr. Bucketmouth.

But to really catch one of the green-backed bruisers, wait until the dragon or damselflies are racing just above the surface during their summer mating rituals. This activity drives the bass crazy and they tire themselves out leaping to catch a dragon on the wing. At this time they're especially vulnerable to small topwater plugs and popping flies. Make it appear as if a bug has just crashed into the water and the bass will blow up on your lure.

Another hot fishing period is the crisp, cool afternoons of early to mid-fall when the bass and sunnies are chowing down for winter. This usually coincides with the heaviest broad-winged hawk migrations in October.



photo-Frank Nale



photo-Berry & Cathy Beck

Wily brown trout abound in the waters around Hawk Mountain.

An added bonus to the Twin Ponds parking area is the additional access it provides to the Little Schuylkill River. From Dreherstown downstream the river contains a combination of coldwater and warmwater fish—some trout, smallmouths and sunnies. It's mostly shallow water, so fish the shaded banks and eddies.

If you go to Twin Ponds and don't want to wet a line, you can take the kids on a nature walk along the water. Look closely among the shallow weeds on the smaller pond. There's a good population of salamanders.

Finding the trout

Any discussion on trout fishing in the Hawk Mountain area has to begin with the Little Schuylkill River.

Not long ago the Little S ran black with coal silt and acid mine drainage. Today the river still has an unpleasant gray cast, but it is also full of browns and rainbows, including some wild browns. A delayed-harvest, artificial-lures-only section extends downstream 1.7 miles from Route 895 along township route 848 south of New Ringgold. The river flows past slopes and flood plains covered with shiny-leaved rhododendron and overhanging sycamores. There are a few wide pools, but mostly it's a single-lane stream until you hit the bridge at Rauchs.

As with any degraded water, extensive mayfly hatches are limited, but the river does have a good supply of caddises and there are spring sulphur and fall little blue-winged olive hatches. I've done well on the Little Schuylkill during the heat of summer on size 18 black ants and with terrestrials fished in the shade. The delayed-harvest area is often a fly fishing haven, so be prepared for heavy angling pressure even during off-peak periods.

For the more adventurous trout fisherman, a plethora of small streams flows along the ridges and down into the valleys that surround Hawk Mountain. One of my favorites is Pine Creek because it contains the Pennsylvania trout fishing prize—the wild brook trout.

Pine Creek runs from west to east, away from the sanctuary. It's a narrow, free-stone tributary of Maiden Creek that maintains a decent flow in the summer.

The first day I fished Pine last season a strong cold front had blown through, kicking up some chilly April winds. As I drove along the mountain road, I saw the rise of feeding trout in a pool by a short bridge. Rigging up with a Royal Wulff I fished above the bridge and it wasn't long

before I connected with a little brookie about six inches long.

It was difficult casting into the strong wind and quite a few times my flies hooked the thick brambles and dead branches that form an arch over the banks. But I caught a bunch of nice brookies and a bagful of chubs in the slower water so it was all worth the trouble.

The thorny multi-flora rose growing on both sides of the stream make hiking simply impossible in some spots, but this same streamside vegetation also helps cool the water during a hot summer. I recommended fishing Pine in early spring or in the fall, both before the leaves appear on the trees and after they're gone. Some of the banks are quite steep, but if you aren't afraid to climb you'll find wild brookies in the short pools.

Now let's move on because there's a lot more trout fishing around Hawk Mountain to cover.

If you followed my directions for the Twin Ponds you'll find a small mountain run crossing the road in the vicinity of the parking lot. Once again, there's no name for this stream on the topographical maps, but it holds a good population of brook trout.

For what must be the largest population of wild brookies in the 10-mile zone, try a little stream called Rattling Run.

Rattling Run—what a wonderful name for a mountain brook! From a Blue Mountain ridge in the area of the Weisener State Forest, Rattling Run flows toward the village of Port Clinton, where it empties into the Little Schuylkill River a few feet from Route 61.

The scene of a demolished trout hatchery, Rattling Run meanders along the side of a steep hill through some lush woodlands. No wider than a bicycle path, "The Run," as locals call it, contains plenty of riffles and short pools as it falls from the mountain.

From the highway walk upstream a few hundred feet to a dilapidated wooden bridge to find some of the best water. Continue on until you hit a cement dam that drastically changes the stream's character above it. Anywhere you find a pool or a pocket below the dam, you're likely to run into some bright, beautiful brookies.

Chaz McDonald and I returned to this stream in mid-June after three days of hot, sultry weather, and we found the water temperature to be just 60 degrees. Chaz used a size 18 Royal Wulff and the brookies went crazy. But be forewarned—if you don't like casting among thick stands of rhodo-

dendron or can't stand the whine of mosquitoes, this stream is not for you.

You can gain access to Rattling Run on Clinton Street off Route 61. There's no public parking but the residents are friendly if you promise to treat their property with respect. You can also park on the other side of Route 61, but be very careful as you cross this busy highway in your fishing gear. A trail follows much of the stream along the side of a hill.

As for stocked streams in the Hawk Mountain area, Maiden Creek is the largest and most popular. From Kempton to the bridge at Blue Rocks, Maiden Creek receives regular preseason and inseason visits from Commission hatchery trucks. Route 143 north from Route 22 parallels much of Maiden and access is good. This is strictly put-and-take fishing, so if your trip to Hawk Mountain coincides within a few weeks of opening day, you're likely to find good numbers of trout. By mid-June, Maiden Creek becomes horribly shallow and the trout are gone.

Kistler Creek in Berks County is another put-and-take fishery in the 10-mile flight zone with both opening day and inseason stocking. Kistler enters Maiden Creek in Kempton and runs east to Lynville.

On the north side of the mountain, Lizzard Creek in Schuylkill County is an approved trout water, as is Cold Run.

As its name implies Cold Run, located between Sharp and Second Mountain, maintains temperatures capable of supporting wild trout throughout the year. Township route 523 and State Game Lands 222 parallel much of Cold Run, which holds both browns and brookies in moderate numbers. In mid-April a tremendous hendrickson hatch comes off Cold Run, and in the fall the wild fish become more catchable with some late-season hatches. If the smaller streams seem too much of a chore and wild trout are what you are after, then Cold Run is the place to go. For one thing, the scenery is magnificent.

As you can see, Hawk Mountain is laced with fishing opportunities. Even when the feathered creatures aren't circling the lookouts, there are scaly ones that make a visit worthwhile. If you use your maps, or even just drive the back roads, chances are, you'll locate a pool or run that hasn't been touched all season. So if you travel to Hawk Mountain, remember to look up to the sky for migrating birds but also scan the shorelines for feeding fish.





Simmons Receives NASBLA Award

John Simmons (left), Director of the Commission Bureau of Boating, received the 1995 NASBLA (National Association of State Boating Law Administrators) Award, presented by NASBLA President Major Larry Rhinehart. Simmons received the award last September at the NASBLA annual conference in Las Vegas, Nevada.

During the last several years, John has taken on the assignment of updating and consolidating the NASBLA policy manual, a task viewed by some as impossible. This two-year job was undertaken with an ad hoc committee charged with the responsibility of purging the NASBLA files, extracting policies, and rewriting them in the new format for the policy manual. John performed this task in a highly professional manner, keeping the president and executive board apprised of his progress.

The NASBLA Award is NASBLA's oldest—first given out in 1969. It is presented to an individual or individuals in recognition of services rendered to NASBLA in the interest of better and safer boating. The award is a ship's wheel clock with a brass plaque.

Erie Anglers Must Wear Fluorescent Orange in 1996

A reminder to licensed anglers planning to fish Lake Erie, its tributaries and Presque Isle Bay in 1996: Don't forget that the Fish and Boat Commission now requires you to wear 1/2-square-inch of fluorescent orange.

More specifically, licensed anglers must possess and display a valid Lake Erie Sport Fishing Permit—which in 1996 is colored a brilliant orange.

Under Pennsylvania state law, the Fish and Boat Commission is required to manage a program providing transitional compensation to commercial fishermen who used gill nets before their ban. To fund the program, the Lake Erie Sport Fishing Permit, in the form of a small sticker applied to the fishing license, was created.

The permit costs \$3 plus a 50-cent agent handling fee. They are available at all license agents in the Erie area.

In 1995—the first year the permits were required—more than \$240,000 was raised to fund the gill net compensatory program. The program will be discontinued when enough money has been raised to fund the gill net compensatory program.—Dan Tredinnick.

The Law and You

by Jeff Bridi

“What are the requirements for registering a boat in Pennsylvania?”

Many fishermen use boats when they go fishing here and often ask questions regarding the registration requirements for watercraft. Registration is required on any boat that uses some form of a motor (including an electric motor) as a form of propulsion. Many people realize that a bass boat with a large outboard motor needs to be registered but some people don't know that even a canoe with an electric motor is considered a “motorboat” and is required to be registered.

Some other situations require that a boat be registered even if no motor is used. Regulations require that any boat using a Fish & Boat Commission lake or access area be registered. Boat fishermen who wish to use one of the Commission's access areas or lakes need to ensure that their boat is currently registered. The Department of Conservation and Natural Resources will also accept a validly registered boat on State Park Lakes as well.

Registration fees are based on the length of the boat being registered and are determined on a 2-year cycle. Currently fees for powered boats are the following: For boats less than 16 feet the fee is \$20.00, for boats 16 feet to less than 20 feet the fee is \$30.00 and for boats over 20 feet the fee is \$40.00. People who do not intend to use a motor may register their boats as non-powered boats for \$10.00 for two years regardless of length. Registration forms are available at many marine dealers, county treasurer offices and any Fish & Boat Commission regional Law Enforcement office.

Out-of-state boaters with a boat validly registered in their home state are granted reciprocal privileges to boat in Pennsylvania for up to 60 days. Persons who may use their boats in this state for greater than 60 days are required to register their boats in Pennsylvania.

Thanks to readers Fred Altrieth Jr. of Rochester, NY, and Bill Grauer of Media, PA, for questions regarding boat registration issues.

Are cast nets legal in Pennsylvania, and if so, what are the restrictions on their use?

The Fish & Boat Commission regulates the types of devices that may be legally used to take fish. Landing nets are permitted to assist in landing fish caught with a lawful device. Nets are also permitted for commercial fishing with the appropriate license. Smaller nets are allowed for taking bait fish. They are restricted to no more than four feet square or four feet in diameter. Nets larger than four feet square are unlawful to possess and may be seized by Waterways Conservation Officers.

Nets are permitted for taking bait fish as long as they are under the immediate control of the person using it. “Bait fish” includes all minnows (except carp and goldfish); darters, killifishes and madtoms; and suckers, chubs, fallfish, lampreys and eels less than eight inches in length. Gizzard shad (*Dorosoma cepedianum*) less than eight inches in length are also considered bait fish. Up to 50 baitfish may be taken a day. No game fish may be legally taken with any type of net.

Thanks to reader Edward Yurkovich of Pittsburgh for this question.

Maurice K. Goddard A Tribute

The rivers run clean now.
Not the thick, black pudding mix
of yesteryear.

I watched the mayfly hatch,
and caught my bass, returned him,
too,

for there are larger ones to hook.
The eagles, too, are back, flight
tormenting

smaller osprey brethren for the
river's horn of plenty.

The otter plays and swims now, not
thinking of his benefactor.

The gift of water now cradled and
shared.

Translucent liquid transcending
transparent urban
and state political boundaries.

To drink, to bathe, to use.

A single-minded purpose vision
produced

these public parks and lands.

The rolling eyes, the pointed arm
and finger, the loud voice,
night after night campaigning and
cajoling

for poll support and people votes.

The bond money came, not once,
but twice, the people spoke,
believing in this promisor of picnic
places.

It's here now, the land,
lush with life,

growing green, unfettered
from concrete clothes and skin of
steel.

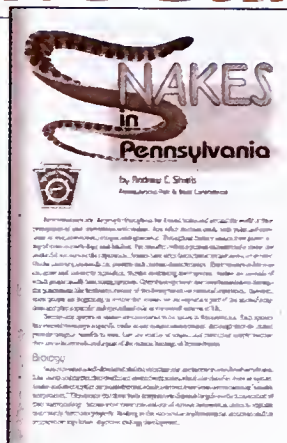
The river's clean now.

The spots of green are ours now.
No need for poignant memories
now;

when we see the life that land and
water bring.

But time to pause and thank
this gruff, white-haired, action
prophet now
and now and now and now.

—Clifford L. Jones, former Secretary,
Department of Environmental
Resources.



New Look for *Snakes in Pennsylvania*

There's a new look for *Snakes in Pennsylvania*—the brochure, that is, not the reptiles themselves. Always one of the Pennsylvania Fish and Boat Commission's most requested educational pamphlets, *Snakes in Pennsylvania* is bound to be even more popular, thanks to a format change that features full-color illustrations, expanded text with more biological background and habitat maps for the state's three venomous snakes.

The piece also contains important tips on differentiating between those poisonous snakes and their non-poisonous cousins, including identification keys such as head shape and scale structure.

"Even though this publication isn't designed to be an identification guide for all 21 species of snakes here in the state, the information it provides can help somebody tell if a certain snake is venomous or not," says Commission Herpetology and Endangered Species Coordinator Andrew Shiels, who authored the piece. "And in the rare event somebody would be bitten by a venomous snake, we've even included recommendations from the staff at the Central Pennsylvania Poison Center at the Milton S. Hershey Medical Center."

The most important function of *Snakes in Pennsylvania*, however, is to dispel many of the myths that surround nature's most misunderstood animals. As Shiels says, "Fear or negative attitudes about snakes often stem from a lack of knowledge of their habitats and role in the ecosystem. Increased awareness of snakes and their habitat usually leads to a new appreciation of them and their part in the world."

For a free copy of *Snakes of Pennsylvania*, with requests send a business-sized stamped, self-addressed envelope to: Publications Section, Pennsylvania Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.

—Dan Tredinnick.

Advisory Council Supports License Compensation

The Governor's Sportsmen's Advisory Council—in its historic, inaugural action—has adopted a resolution supporting the reimbursement of more than \$780,000 owed to the Pennsylvania Fish and Boat Commission for free fishing licenses issued over the last 27 years.

The sum is due the agency because of a legislative act adopted in 1967 that requires the Commission to provide free fishing licenses for certain disabled veterans and soldiers on leave during the Vietnam War. Since 1968, the Commission has calculated the amount of revenue due from the licenses issued in accordance with the law. The General Assembly, however, has never appropriated any money to the Fish Fund for repayment. Commission records indicate that \$788,207 (exclusive of lost interest) is outstanding.

"For more than 20 years, Pennsylvania's sportsmen have recognized that this money is owned to the Fish and Boat Commission," said Vernon Ross, the Governor's Sportsmen's Advisor. "The council, which Governor Ridge has formed, finally gives sportsmen an organized voice, and this council has voted unanimously to recommend to the Governor that he support repayment."

The Sportsmen's Advisory Council is a 15-member board created by Governor Tom Ridge to recommend administrative policy on items of importance to anglers, hunters and conservationists. The resolution urging the General Assembly to compensate the Fish Fund came at the board's first meeting, held December 15 in Harrisburg.

There is current legislation that seeks to compensate the Fish Fund for the free fishing license revenues. House Bill 859 has been introduced by Representative Merle Phillips (R-Northumberland) with bipartisan co-sponsorship. This bill would provide for \$780,000 to be paid to the Fish Fund.—Dan Tredinnick.

Improved Outboard Engine Oil Now Available

Outboard engine manufacturers are developing improved two-stroke engines in response to stricter Environmental Protection Agency (EPA) emission limits. Consumers are also demanding better outboard engine performance, so the National Marine Manufacturers Association (NMMA) is encouraging outboard owners to use a two-stroke oil with the registered trademark TC-W3(R).

This higher grade lubricant is best able to protect against elevated temperatures

and pressures in cylinders. It also meets the needs of water-cooled outboard engines that use direct fuel injection. As an upgrade from oil licensed under NMMA's registered trademark TC-WII(R), TC-W3 oil can be used in any engine currently running on TC-WII with the result of enhanced protection and performance.

The power range of two-stroke-cycle engines spans from 2 horsepower to 300 horsepower. In grading two-stroke oil, "TC" stands for *two-cycle*, "W" means

water and "3" represents the quality level. To achieve TC-W3 status, a lubricant must pass many NMMA bench tests for fuel/oil mixability, rust prevention, fluidity and filterability, as well as engine tests for lubricity, preignition and general performance. NMMA grants licenses only to oils that meet all requirements. Licensing permits a manufacturer to display NMMA's symbol on its product.

Angler's Notebook by Seth Cassell

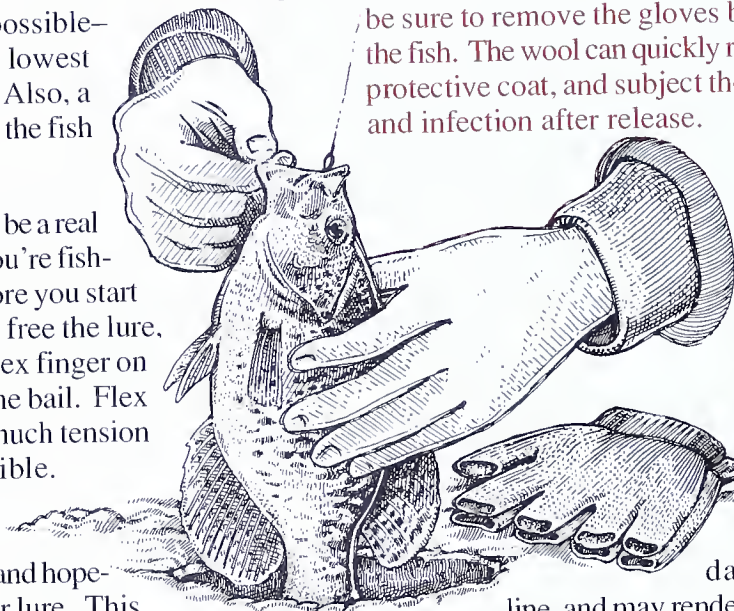
Always try to land a fish as soon as possible when catch-and-release fishing. By fighting a fish to total exhaustion, its chance of survival greatly decreases. To avoid this, use the *highest* pound-test line possible—most anglers use the lowest pound-test possible. Also, a large net helps to land the fish quickly.

Snagging a lure can be a real hassle, especially if you're fishing from a boat. Before you start your motor or row to free the lure, try this: Put your index finger on the line and release the bail. Flex your rod and put as much tension on the line as possible. Then, snap your finger off of the line, releasing the tension and hopefully dislodging your lure. This method works best with spinning reels.

When fishing during the winter, live minnows can quickly die if abruptly transferred from warm minnow-bucket water to the cold water of a lake or river. Instead, gradually cool the minnow bucket by using ice cubes or by placing the bucket outside. By doing this, the minnows gradually become acclimated to the cold water and stay alive much longer.

Ice fishing for largemouth bass is becoming a very popular pursuit, but the fish can be difficult to locate when the ice is on. Try fishing near channels, deep dropoffs and other structure. Largemouths usually hold close to the bottom during this time, but sometimes a lot of experimenting in lure or bait placement is needed to be successful.

It helps a lot to wear some sort of fishing gloves when fishing during winter. Fingerless, rag-wool gloves are the cheapest and most popular type. If you plan to release your catches, be sure to remove the gloves before handling the fish. The wool can quickly remove the fish's protective coat, and subject the fish to disease and infection after release.



Although it is a great idea to practice fly-casting during the off-season, never do it on a hard surface such as a macadam or stone driveway. This will inflict much damage to your line, and may render it unusable. Instead, practice on your lawn or a soft surface. To practice your accuracy, tie a piece of wool yarn on the end of your leader and see if you can place it on top of a paper plate.

Many anglers like to keep their best catches for mounting. In order to preserve your catch-of-a-lifetime, it is important that you take proper care of your trophy before taking it to the taxidermist. First and foremost, do not remove its entrails. Also, get the fish home as soon as possible. Then, wrap it in a wet towel, and place it in a plastic bag. Finally, place the fish in the freezer until you are ready to take it to the shop. By taking these steps, you help ensure that your grand catch will be preserved for years to come. For more information, contact your local taxidermist.

illustration—Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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SMART

Angler's Notebook

by Carl Richardson



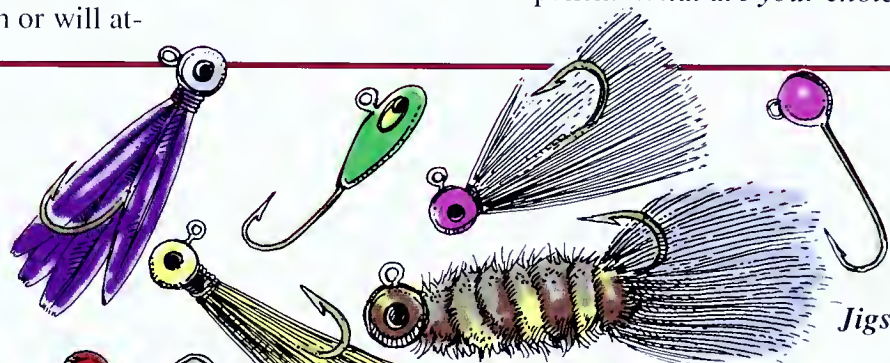
Ice Fishing and Jigging: What's at the End of Your Line?

Few, if any, ice anglers rely only on tip-ups to put fish in the skillet. Using either a special ice-jigging rod, a small ultralight rod or other homemade contraption, anglers jig a lure up and down through the hole. This method puts a moving lure right in front of the fish or will at-

tract nearby fish. In fact, there are some fish that will take only a jigged bait. Tipping these lures with live bait or cut bait makes a deadly one-two punch. The lure attracts and the bait is the knockout punch. *What are your choices?*

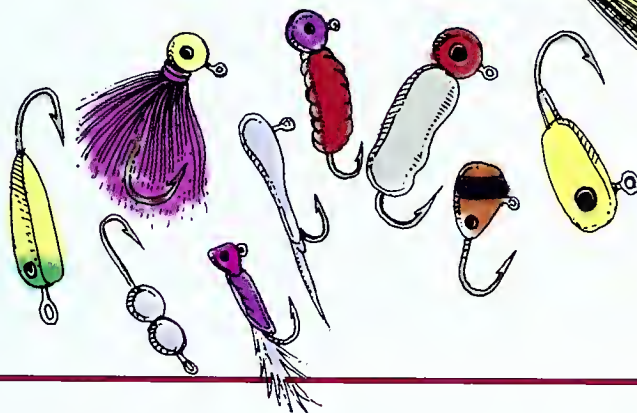
JIGS

The same small leadhead jigs used for catching panfish work through the ice. Bluegills and other panfish eat a lot of tiny insects and plankton. These lures are only larger versions of these food items. Sizes



Jigs

Tear Jigs



ranging from 1/16-ounce and smaller are right for ice fishing. The painted head is the attractor and the bait draws the strike.

There are very tiny jigs called ice jigs or tear jigs. They are ultra-light and ultra-small. They work best when fish are finicky and won't take a larger jig. These baits are ideal once you have located a school of fish.

FLASH BAITS

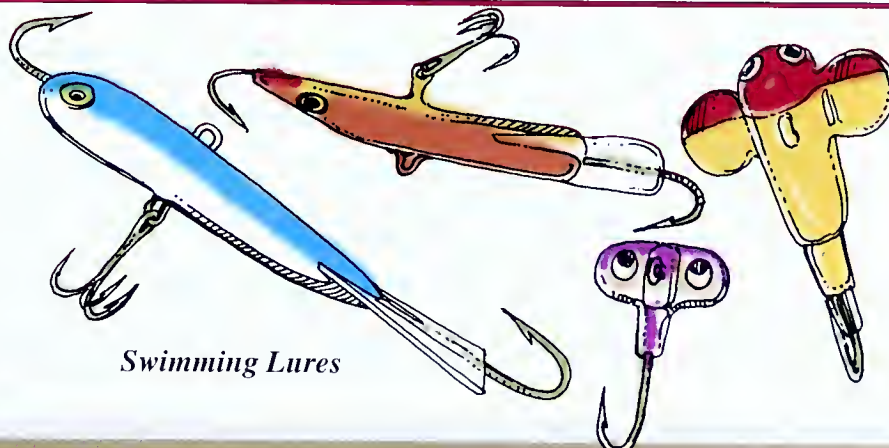
These baits flash and flutter around as they are jigged up and down. Your spoons, spinners and blade baits can do double duty when used through the ice. There are also lures made just for ice fishing that fall into this category. Their flash draws the attention of fish, especially those that are fish-eaters. These baits are more effective on fish that move about or feed mostly on fish. Trout, bass, pike, walleyes and even perch are taken on these baits.



Flash Baits

SWIMMING LURES

These lures swim or spin in circles as they are jigged. These lures have less action than flash baits, but more than standard jigs. Again, their action attracts fish. Some can be tipped with bait, but some won't swim right if they are. Walleyes, bass, pike and muskies are some species that will eat these lures.



Swimming Lures

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PAGE 13
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**Expanded Trout Fishing
Opportunities**

Straight Talk

The People have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As a trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all people.—Section 27, Article I, Pennsylvania Constitution.

Here in Pennsylvania we are blessed with a great diversity of natural treasures. Our rich aquatic resources sparkle like a precious gem amidst this collective wealth. From small mountain headwater streams where bejeweled brook trout flash to the shimmering expanses of Lake Erie, the Commonwealth is home to 54,800 miles of streams and rivers and 773,600 acres of water. Pennsylvania is also home to more than one million licensed anglers who fish these waters some 22 million times annually. In all, one in every 12 Pennsylvanians holds a fishing license. Boating is similarly popular, with 330,000 registered watercraft. Combined, fishing and recreational boating in Pennsylvania generates an economic effect valued at approximately \$2.7 billion per year.

The fishing and boating opportunities that we enjoy today are the direct result of action taken by Pennsylvania citizens and lawmakers more than a century ago. This month, the Pennsylvania Fish and Boat Commission observes its 130th anniversary, an historic legacy of advocacy and protection for the Commonwealth's aquatic resources. The highlight will be an open house at the State Capitol on Wednesday, March 27.

Early in 1866, public outcry over diminishing fish populations in the Commonwealth's rivers and streams prompted a convention in Harrisburg. Soon after, the General Assembly passed Act 336 of 1866, providing for one Commissioner charged with overseeing American shad passage on the Susquehanna River. The act was signed March 30, 1866, by Governor Andrew G. Curtin. Governor Curtin appointed James Worrall, of Harrisburg, as the state's first Commissioner of Fisheries.

In 1873, the body was reorganized and the number of Commissioners increased to three. Six years later, in 1879, three more members were added and the Commission continued to be comprised of six members until another reorganization in 1903 when

the group evolved into the Department of Fisheries. That structure held for another two decades. Then in 1923 the Board of Fish Commissioners was born, consisting of a Commissioner of Fisheries and seven additional members. The governing law was changed again in 1949 with the Act of April 25, 1949, creating the Pennsylvania Fish Commission. This was the same year the Executive Director position was created, a post first filled by Charles A. French of Ellwood City. In 1991, "Boat" was added to the Commission's title to more fully emphasize the agency's role in managing pleasure boating in the state.

Much has changed over the course of 130 years, and the agency's work has increased greatly in size and scope. The Commission constructed the first fish hatchery in Lancaster County in 1873. Today, we operate 14 fish culture stations and annually stock more than 5 million adult trout and more than 100 million warm/coolwater species.

Early fisheries laws were fairly simple, such as legislation in 1901 that designated species of fish as either game or food. In the

modern era, fishing and boating laws are codified and Commission Waterways Conservation Officers have limited policing powers. In its infancy, the Commission had a difficult time enforcing fish laws and other phases of its work, often handicapped by a lack of funds, which had to be appropriated by the Legislature. For a period in the late eighteenth century, funds were obtained by public

subscription when the Legislature failed to appropriate the necessary funds. In 1922 the first resident fishing licenses were established at a cost of \$1, and for the first time the Commission became self-sustaining. To this day, the agency's operations are funded primarily through its users, the anglers and boaters who support our pro-



Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

grams through fishing license and boat registration fees.

In this our 130th year, we are again in the process of making changes and improvements, including a reorganization of staff structure. The centerpiece of our staff reorganization is the recognition that we are one Fish and Boat Commission, with a whole that is stronger than its individual parts. We will strive toward accomplishing our mission as an agency, not as individual bureaus. My proposed reorganization plan was approved by the Commissioners at our January meeting and awaits review by the Governor's Executive Board.

The reorganization plan for the Fish and Boat Commission represents a step forward that will help us more effectively serve the anglers and boaters of Pennsylvania well into the future. It is fitting that the occasion of our 130th anniversary coincides with our preparations for the coming decades. We have arrived at both a milestone and a turning point. As such I am reminded of the words of Robert M. Rankin, former president of the Pennsylvania Fish Commission, who upon the agency's Centennial anniversary in 1966 noted: "The struggle is keener, more intense, with each era. It demands strong, young, vigorous and progressive people to succeed... today. We of the Commission have reason to believe in our programs, our staff and our workers. They, too, will make their mark on our future history."

Without a doubt, they have made their mark. All the Commissioners, employees and volunteers of the agency over the last 130 years have contributed immensely to the Commission's mission of "...providing fishing and boating opportunities through the protection and management of our aquatic resources."

Peter A. Colangelo



Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

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Ice-Out Pymatuning Walleyes by Darl Black.....	4
Ready, Set, Go! by Charles R. Meck.....	7
Shad Fisherman Extraordinaire by Vic Attardo.....	10
1996 Expanded Trout Fishing Opportunities by Tom Greene.....	13
Advanced Bait Fishing for Trout by Mike Bleech.....	16
Highlights of the January PA Fish & Boat Commission Meeting by Dan Tredinnick.....	20
Pennsylvania Fish & Boat Commission Publications List.....	21
Early Trout in the Shenango River Watershed by Robert L. Petri.....	23
On the Water with Robert L. Petri.....	27
SMART Angler's Notebook by Carl Richardson.....	31

The cover

This issue's front-cover shad angler is George "Pappy" Magaro, photographed by Art Michaels at the confluence of the Lehigh and Delaware rivers, at Easton. Shad fishing: Page 10.

Carp, bullheads and suckers in northcentral Pennsylvania

Commission Area 3 Fisheries Manager Bruce Hollender mentions the possibilities for catching nice-sized carp, bullheads and suckers, and plenty of them all, in several northcentral Pennsylvania waterways. "Glendale Lake, Cambria County, Sayers Lake, Centre County, and the West Branch Susquehanna River, Lycoming and Northumberland counties, all showed abundant carp populations," Hollender says. "We surveyed Glendale and Sayers lakes in 1995, and since the late 1980s we've surveyed the West Branch Susquehanna annually."

Hollender says that there are plenty of 10-pound to 15-pound carp in these waterways, and in the West Branch Susquehanna there are 20-pounders in the pools and at the creek mouths. The West Branch includes some 35 miles of prime carp water from Williamsport to Sunbury.

"Little Pine Lake, Lycoming County, has a quality bullhead fishery," Hollender says. "We surveyed the lake in 1993 and found the highest number of bullheads 12 inches and over in all of this management area." Hollender recommends these other good bullhead lakes in his area: Kettle Creek Lake, Clinton County, Sayers Lake, Centre County, Curwensville Lake, Clearfield County, Walker Lake, Snyder County, Rose Valley Lake, Lycoming County, and Faylor Lake, Snyder County.

In addition, if you like sucker fishing this time of year, Hollender says there's "excellent" sucker fishing in Bald Eagle Creek, Centre County, and in Fishing Creek, Clinton County.—Art Michaels.



In part, the trick to slightly better quality fish is to put a bait in front of walleyes while they are still in deep water.



ICE-OUT

Pymatuning Walleyes

by Darl Black

Snodgrass Access

The aluminum hull of the 16-foot boat broke through the dirty gray ice like a hot knife through soft butter. The trail behind us looked like a slush drink as mushy ice closed in around the outboard's exhaust bubbles.

"See, I told you there was nothing to worry about," touted Dave Hornstein, a longtime fishing buddy who was at the throttle. "All we have to do is slice through about 50 yards of this rotten ice to reach open water. With this hot sun in the blue sky, most ice on the lake will melt in the next few hours. Not to worry, unless..."

It was the "unless" that made me a bit nervous. About a mile to the north, the lake's ice pack appeared much thicker. It had broken loose from shore, making a gigantic iceberg.

"...Unless this southerly breeze switches around to a north wind and blows the ice down-lake into the Snodgrass Ramp," Dave said. "Then we might have a problem."

The "problem" would be getting the boat back to the trailer. It would mean a long walk to the vehicle for me and then a drive around the lake, while Dave motored the boat to an ice-free ramp—assuming there would be a boat path to an open ramp. It's a potential situation that confronts

Hornstein whenever he fishes the reservoir on the very day the ice breaks up. You see, Dave is a diehard walleye fisherman who launches one of the first boats onto Pymatuning in the spring.

But five minutes after reaching the open water and locating the proper depth, we had the first walleye on the line. Two more fish followed, and trepidation about changing ice flows was quickly forgotten. An hour later as I looked north, I could see the ice sheet retreat before my eyes under a strong breeze and a very hot sun.

PA's most popular walleye lake

Pymatuning Reservoir, in northwestern Pennsylvania, is unique because standard inland fishing seasons do not apply. As a boundary water, regulations are established jointly by the Commission and the Ohio DNR. When walleye season across Pennsylvania closes from March 15 to the first week of May each year, the 'eyes at Pymatuning are under a full court press from anglers. There is no closed season on the 13,000-acre Pymatuning Reservoir.

By the time the main force of anglers arrives at Pymatuning in late April, a vanguard of hardcore walleye hunters has

already been fishing the lake for several weeks. Ice-out typically occurs sometime between March 10 and March 20. The first day that a ramp is ice-free, there will be anglers launching boats.

"Ice-out fishing pressure has been increasing in recent years," says Hornstein. "Years ago there were a dozen or so regulars who hit the lake as soon as the ice disappeared. Quite often I would be the only boat on the water for several days. Today, I may find myself waiting in line at the ramp. Still, the walleyes seem to be holding their own. There's a lot of room and a lot of fish."

I have fished many lakes and rivers in Pennsylvania, but Pymatuning is the only one where I am guaranteed walleyes on every trip. At one time Pymatuning was known as the "Walleye Capital of the World"—at least, that was the billing provided by the area tourist association. However, the lake's reputation was severely crimped when the Great Lakes walleye fishery began to skyrocket almost two decades ago. Gradually, as Lake Erie anglers increased their limit catches of big walleyes, the title of Walleye Capital switched from Pymatuning to Erie. Today, Pymatuning has a reputation as a lake

for numbers of catchable walleyes, but it is not considered a trophy fish water by any stretch of the imagination.

"The majority of walleyes harvested by anglers at Pymatuning are barely 15 inches long," says Hornstein, who imposes his own personal 15 1/2-inch minimum size so the local WCO never has any question about whether his fish are legal when checked. "There are a lot of fish taken, but few of quality size. Later in the spring, you may catch 20 to 30 sub-legal walleyes for every legal fish. However, in the ice-out period, the percentage of legal fish is about 50/50, and the average size is a little better."

In part, the trick to slightly better quality fish is to put a bait in front of walleyes while they are still in deep water. Once the fish move shallow for the spawn, small males become the most aggressive feeders and therefore are the ones most frequently caught. In addition, the increased number of anglers on the water in late spring greatly narrows the chances of an individual angler catching a legal walleye.

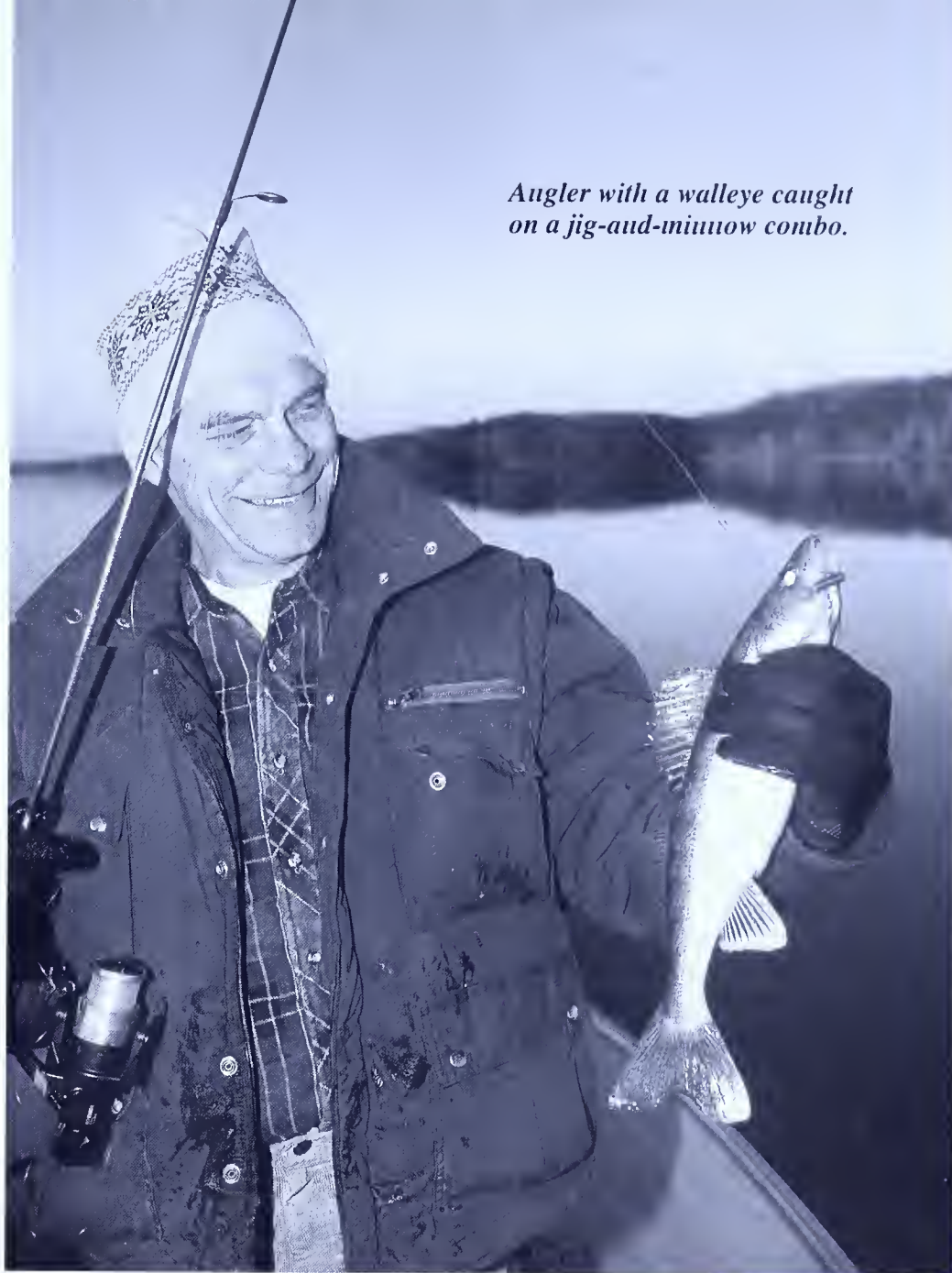
Location and technique

Hornstein instructed me some years in early spring walleye location and techniques. His approach to ice-out walleye fishing at Pymatuning is as effective today as it was back then.

Actually, to understand the early spring walleye fishing, it's best to return to late-fall fishing. Hornstein is usually one of the last walleye anglers on the open waters of Pymatuning before ice-up. At that time, most walleyes are located on the channel edge dropoff or adjacent deepwater flats in 18 to 25 feet of water. That's the place where Hornstein begins looking for fish at ice-out.

"Now, don't misunderstand. The deep flats are not the only place to find walleyes right at ice-out," says Dave. "Some fish have already moved shallower. I know individuals who wade the north end of the lake with some success. Other anglers line the stone wall at the Linesville Spillway at ice-out to catch walleyes that move into the current coming under the bridge from the sanctuary. Still, my approach is the way I like to fish, and I think it produces more walleyes."

Hornstein targets the southern end of Pymatuning below the Andover/Espyville Causeway. The initial trip is usually out of the Snodgrass launch because most years that is the first ramp free of ice. But within 48 hours, most of the more than a dozen ramps on the lake are also ice-free.



Angler with a walleye caught on a jig-and-minnow combo.

With a lifetime of walleye fishing on the lake, Dave has many spots to choose at ice-out. Yet, each site has several factors in common. First, water depth will be at least 20 feet. Second, there is wood cover—primarily old stumps, although some sites may have manmade cribs or brushpiles. Third, the most productive areas are deepwater flats, as opposed to a hump or sloping structure.

Hornstein's primary tactic is to drift across the flats slowly with a minnow on a jighead.

"The deeper walleye schools do not appear to be tightly grouped at this time of year," says Hornstein. "Basically, they are in transition, on the way to shallower water. In addition, there is not a lot of aggressive feeding taking place. You can't anchor and catch fish after fish as you can later in the spring. Considering these factors, the best approach is drifting to cover a lot of territory."

Drifting across a flat is as effective as any precise boat maneuvering approach.

On days with a light breeze, the trolling motor is used intermittently to maintain a particular direction across the flat. With a stronger breeze, constant running of the trolling motor into the wind helps to slow the boat to fish the jig at a speed that walleyes are willing to attack. Drift socks may also be used to slow the boat.

"Dead-calm days are the toughest ones for catching walleyes at ice-out," says Hornstein. If the boat is not moving, then the bait is not being seen by enough walleyes. Trolling with the electric motor on a calm day does not seem to generate as many strikes as drifting on a breezy day, so there has to be something about the waves that activates the fish, too."

Hornstein prefers a light to moderate chop—enough breeze to move the boat, but not so strong that it pulls the jig way off the bottom. What's too strong a breeze? If the trolling motor set at a moderate speed cannot hold the boat stationary, then the wind has reached the upper limit of effective fishing.

The bait

Hornstein's choice of lure presentation is simple. He uses a plain ballhead jig tipped with a fathead minnow. When the walleyes move shallow, Dave becomes a proponent of using different colored soft-plastic bodies on the jighead in addition to the minnow. He insists that finding the color that is most visible under the given sunlight and water conditions increases the catch rate. However, in the immediate ice-out period, Hornstein is just as convinced that dressing the leadhead with colorful plastic makes little difference.

"I catch just as many walleyes on a plain leadhead with a minnow as I do when I add a soft-plastic grub," Hornstein says. "In the deep, murky ice-out water, I'm not sure that color plays much of a part in a walleye finding the bait. Besides, dragging a jig through a mine field of stumps under breezy conditions results in a lot of snags. Many jigs are lost. Grub bodies only add to the expense when I hang something and can't dislodge the jig."

The weight of the jighead used is based on the speed of the drift. The jig should track the bottom, occasionally bumping but not constantly dragging. To achieve this, the weight of the jighead must be matched to the speed of the drift. A light jighead in a moderate breeze rides too far above the bottom.

Typically a 1/4-ounce head is used in a light breeze, a 3/8-ounce head in a moderate breeze and a 1/2-ounce head in a heavy chop. His minnows are medium-size fatheads purchased at the local bait shop. His jig is a plain leadhead, so Hornstein depends on fresh, lively minnows to play a major role in attracting fish. Minnows are hooked through both lips.

"I want the jig drifting on as short a line as possible," Hornstein says. "With an extremely long line, strikes are not easily detected and snagging the bottom increases because you do not control the jig as well as on a shorter line. Ideally, the jig should be skimming less than a foot above the bottom. When I drop the rod tip back or strip off a little bit of line, the jig should touch the bottom."

Hornstein uses two rods—one held in hand and the second one set against the boat's gunwale instead of placing it in a rod holder. The rod held in the hand is pumped slowly, raised and lowered four to eight inches. On the static rod, the preferred angle of line coming off the rod tip is close to 90 degrees. The flatter the

ICE-OUT

Pymatuning Walleyes

angle (that is, closer to 180 degrees) the farther behind the boat the jig is riding and the greater the likelihood of missing a fish or snagging a stump.

"When a walleye starts to take a bait in cold water, you do not want to set the hook immediately," says Hornstein. "If a hit occurs on the static rod, I simply watch the tip dance until it begins to bow steadily. Then I pick the rod up and set the hook. With the hand-held rod, I drop the tip back to give the fish a little slack, count off several seconds, and then set the hook."

Other options

Dave Hornstein has a system of tactics and locations that works for him during the spring. He targets the deep water immediately after ice-out in March, and then moves to the shallower spawning areas by April. When fishing the spawning points and humps, he continues to use a jig and minnow. However, the weight of the jighead is reduced to 1/8-ounce or 1/16-ounce in the shallow water.

When fishing with Dave on the deepwater flats, I usually experiment to see what else might produce walleyes. For instance, I will try colorful soft-plastic grub bodies to see if these jigs take more walleyes than a plain leadhead and minnow. I have also substituted a nightcrawler in place of a minnow on the jighead. However, minnows definitely outproduce worms in cold water. A 12- to 14-inch short-snell walking-sinker rig baited with a fathead minnow works, too. In addition, I have caught Pymatuning ice-out walleyes on bladebaits and jigging spoons, but the deep stump fields can really eat up these treble-hook lures.

Immediately after ice-out, a few anglers can be found tossing lures at night from key shoreline areas, and connecting with walleyes. However, night fishing with floating minnow baits really picks up in April.

It's important to keep in mind that Pymatuning is a wide open, shallow lake. Once the ice disappears and there is no late-winter storm to set things back, the lake warms rapidly. Walleyes may move quickly from ice-out locations to spawn

locations in a matter of days, so anglers must be aware of the possible changes to stay with the fish.

Through the spawn period it is still possible to catch walleyes on the deep flats. But in April, most fish on these flats are immature walleyes that did not move shallow to spawn.

By early summer, the deep flats again produce keeper-size walleyes as the adult schools regroup for summer feeding.

If you can't wait until May to catch walleyes, Pymatuning is the lake to visit at ice-out and the deepwater flats may be the best place to fish.

ANGLER

Walleye Stocking

The peak walleye spawning attempt at Pymatuning takes place the last week in March. It must be referred to as a "spawning attempt," because Commission biologists suspect there is little successful natural reproduction taking place in the reservoir. Still, adult walleyes make a spawning run to firm-bottom, wind-swept points and humps with water depths from two to six feet. Many male walleyes linger in the spawning sites until late April.

According to Craig Billingsley, Commission Area 1 Fisheries Manager, the Pymatuning walleye fishery is dependent on stocking. Stocking has been as high as 13 million fry annually in the last decade. However, Billingsley has discovered that by reducing the stocking to 2.5 million, the number of legal-sized walleyes harvested remains the same.

"With those high stocking numbers, there were so many sub-legal walleyes in the lake that anglers complained the fish were slow-growing, even though that is not what I have found," says Billingsley. "Reducing the stocking actually provides a smaller year class so anglers do not catch a ton of tiny walleyes, yet the number of fish reaching the 15-inch minimum size has remained the same."—DB.

Ready, Set, GO!

BY CHARLES A. MECK

Upper Pine Creek near Galeton

How many times have you waited until the last minute to get your fishing gear ready for opening day? How many times on the morning of opening day have you been searching for a rod, a reel, a box of flies, waders or hipboots, or some other necessary gear for the opening of the trout season in Pennsylvania? With a little preseason preparation you can go out opening day on Commonwealth streams with a better chance of success and with much less stress. Here's how.

Getting ready for the official opening of the season means not only getting your gear ready, but also deciding where you'll fish and who you'll fish with. If you're like so many Pennsylvanians, then you probably have a regimen that you've developed over a number of years. You've fished the same section of the same stream for several years with the same friends. But before you arrive at the stream you should get prepared with a good selection of opening day patterns.

On opening day I always carry dry fly patterns like the Quill Gordon, Hendrickson, Little Blue-Winged Olive Dun, Blue Quill, and downwing patterns like the Grannom.

Pattern selection

You have even more decisions before you begin the new season. If you fly fish you have to determine which patterns you'll use. And of course, if you tie your own flies you should make a list of patterns you'll need. My selection of wet flies includes the Green Weenie, the Beadhead Woolly Bugger, Beadhead Pheasant Tail Nymph, and the Lady Ghost streamer. I include several dry fly patterns in case I meet one of those early season hatches. On opening day I always carry dry fly patterns like the Quill

Stocking Bald Eagle Creek



Ready, Set, GO!



Hendrickson with a trailing shuck

Gordon, Hendrickson, Little Blue-Winged Olive Dun, Blue Quill, and downwing patterns like the Grannom.

I'll never forget that opening day several years ago when a hatch appeared on Bald Eagle Creek, in central Pennsylvania. Bryan Meck, Rick Nowaczek, and I had taken a lunch break and arrived back at the stream shortly after noon. As we re-gathered our fishing gear out of the car, we saw an angler actually run from the stream back to his car. As he ran he yelled to us, "the quill gordons are on, the quill gordons are on." He explained, once he got his breath, that he wanted to use a fly rod and match the hatch rather than the spinning gear he had with him on the stream. He quickly grabbed his fly rod from the trunk of his car and a box of flies, and raced back toward the stream.

The three of us also ran to the stream to see the hatch this young angler had just described. As we arrived at a fairly deep riffle with a pool below, we saw trout rising—in every pool and riffle these fish rose that opening day to a heavy hatch. No, it wasn't a quill gordon hatch as the angler had described, but here in front of us on opening day thousands of hendricksons appeared, and these recently planted trout cooperated fully by rising freely to this first big hatch of the season.

Bryan, Rick and I jogged downstream tying on a size 14 Hendrickson pattern as we ran. In the very first riffle we approached, maybe a half-dozen browns and rainbows had already taken up feeding positions and fed on these large mayflies. Bryan caught the first trout on a Hendrickson. We always celebrate when we catch our first trout of the season on a dry fly. That celebration was very short-lived because we realized the hatch wouldn't last long.

At the next riffle downstream we saw another three or four trout rising to a mixture of hendricksons and red quills. Anglers call the female of the species the "hendrickson" and the male the "red quill." At this riffle Rick caught his first trout of the new season and continued casting to more rising trout. After two hours of actually running from one pool and riffle to another the hatch ended—but not before we had witnessed

one of the most spectacular opening day hatches of my long fishing history. The three of us ended that opening day afternoon releasing more than 30 trout on that unexpected, premature hatch.

That hatch on the Bald Eagle wasn't a fluke. I've witnessed opening day hatches on many occasions on Pennsylvania waters. Even far north waters like upper Pine Creek near Galeton sometimes boast good hendrickson hatches on opening day or at least the first week of the season.

But you can encounter more than one hatch on opening day. In fact, on Fishing Creek, just southwest of Lock Haven, I've seen as many as five hatches on one opening day morning and afternoon. As early as 10:00 a.m. that opening day I saw little blue-winged olives appear, followed shortly by blue quills, then quill gordons, and finally a smattering of hendricksons and grannoms appeared late in the afternoon.

Here are some of the hatches you might see opening day.

Little blue-winged olive dun—size 18 or 20.

Hendrickson or red quill—size 14.

Blue quill—size 18.

Quill gordon—size 14.

Grannom—size 12 to 16.

Little black stonefly—size 16 or 18.

Early brown stonefly—size 14.

The number directly after the hatch indicates which size pattern to use to match the hatch. The last three mentioned are often called "downwings" (caddisflies and stoneflies) because of the way they hold their wings when at rest.

But let's face it—few of us will encounter good hatches on opening day. The odds are just against such an opportunistic happening. Most often you'll encounter water temperatures around 45 degrees and streams bankful—both conditions typically inferior for hatches. So prepare for no-hatch situations on opening day. Few hatches appear if the water temperature stays below 45 degrees.

Bryan Meck has started the last three opening days with the Beadhead Woolly Bugger. Guess what? He's begun and finished the opening day with that same fly. While I'm switching from one pattern to another I'll see Bryan upstream catching one large trout after another on that opening day pattern he swears by. Just this past year Bryan landed an opening day 23-inch rainbow on the pattern. The year before, a 22-inch rainbow. Each year he seems to out-fish all nearby anglers with his Beadhead Woolly Bugger. He finds this pattern so effective that he often continues to use it on the Susquehanna River during the entire smallmouth bass season. He finds it to be one of the most productive patterns on that river.

But you'll also find other wet flies and streamers effective in April. Look at the Green Weenie. Ask Pete Ryan of Coudersport if the Green Weenie works on his favorite northern Pennsylvania streams. Pete recalls with fond memories how this pattern even worked in late-summer fishing just this past year. The Green Weenie works on opening day and throughout the fishing season.

Don't overlook the beadhead nymphs in early season fly fishing. Patterns like the Beadhead Pheasant Tail Nymph and the Beadhead Hare's Ear perform well on those cold spring days.

Be sure to carry these streamers and wet fly patterns for opening day.

1. Beadhead Woolly Bugger
2. Lady Ghost
3. Muddler Minnow
4. Beadhead Pheasant Tail Nymph
5. Green Weenie

Leaders and lines

Check that leader and fly line on those reels that you haven't used since last year. I still vividly remember a decade ago when I used the same leader on my reel from the previous year. I hooked a heavy early season brown trout on a Lady Ghost and the fish broke the line. Why? I had tied a short piece of 6X tippet to the leader the past year. That tippet broke quickly when I tried to land the heavy trout.

For early season I prefer nothing heavier than a 4X tippet. With the new leaders on the market now a 4X tippet usually runs six-pound test—a vast improvement over tippets made just a decade ago. You'll find a 4X tippet even works well with all the early season hatches you'll encounter.

By the way, if you're trying to determine the diameter of your tippet, remember if you know the X number (such as 4X, 5X, or 6X), subtract that from 11 and the remainder is the diameter of your leader. Thus, a 4X tippet has a diameter of .007 and a 5X tippet, .006.

Check your fly line for cracks and cuts. Dress the fly line before opening day. Carry several types of fly lines on different reels with you early in the season. If the water you plan to fish is deep and swift you might want to use a sinking tip line rather than a floating line to get the pattern deeper more quickly.

Where to go

The opening day experience can be one of the most frustrating or one of the most rewarding. A lot depends on the stream you choose to fly fish. If you're looking for a hatch, then you should select from one of those listed below or one you're familiar with and that you know holds some good early season hatches. If you're looking for plenty of room and few anglers on opening day, then look for one of the many streams and rivers in the Commonwealth with wild trout populations and no planted trout. Walk along the Little Juniata River, Spring Creek, or the lower end of Penns Creek on opening day and you'll probably spot few other anglers. Why? Most fishermen on opening day fish on those stocked streams. If you really want an enjoyable experience to greet the new season, then try one of the state's many small mountain streams with wild brook trout and streambred browns. Here, too, you'll often have a good section of the stream to yourself.

Opening day tactics

Opening day situations often call for different tactics. High water and low temperatures preclude vicious strikes so common when water temperatures rise above 50 degrees. If you encounter high cold water the first day, then you can follow several rules.

First, remember the cold water slows the activity of the trout in the stream. Alter the depth and retrieve of your patterns. First try the pattern you're using deep. I hate splitshot, so I normally add some weight to the body of the pattern when I'm tying it. If you fail to get any strikes fishing the pattern deep, take it up off the bottom. If nothing else works, try the pattern near the surface.

So go deep with your patterns. Vary the retrieve of the fly. Fish it first on a dead drift. Cast upstream or across stream and if the stream you plan to fly fish is cold and high, then fish the pattern slowly. Vary the speed. Fish the pattern on a dead drift and alternately twitch it. Many of those early season strikes occur on the arc, or swing, of the wet fly—this suggests to a trout that the food is moving up toward the surface—away from the fish, and they often attack violently at this time.

Sometimes the only way to catch any trout on those cold, blustery days of April is to bounce the pattern off the bottom. You literally have to get the pattern directly in front of the fish before it strikes.

It's difficult to avoid crowds on opening day. Anglers gather on the best stocked streams in April. If you can, try to fish one of the many streams float-stocked in pre-season.

We talked about productive patterns for opening day earlier. One rule of thumb I use—change flies after a half-hour. If the Beadhead Pheasant Tail Nymph doesn't produce any strikes in a half-hour, then switch to the Green Weenie. If that doesn't produce any results, then use a Beadhead Woolly Bugger with a Flashabou tail. And if none of these works, then try a Lady Ghost Streamer.

I've had those occasional days when nothing works and have left the stream by 10:00 a.m. in disgust. Later, in the

afternoon, after many of the anglers have gone for the day, I come back to the same section and have done well with the patterns that failed me earlier.

Will you have the adrenaline going this opening day? Will you enjoy the occasion as much or maybe as little as you have in the past? Will you be adequately prepared for the long-awaited event? Make the special day much more enjoyable by preparing several weeks in advance. Know where you're going to fish, the equipment you'll need, and of course, if you fly fish, which patterns you'll use and how you plan to fish them. With a little advance preparation you can be ready, set and go for the opening of the fishing season. Make that opening day event more memorable than the last one.



A full-page photograph serves as the background for the article. It depicts a fisherman, seen from the side, wearing a dark jacket and a white cap. He is in a white boat, leaning over the side and casting a long-handled net into a river. The water is dark blue with white foam from the net's splash. In the background, a large steel truss bridge spans the river. The overall scene is dynamic and captures a moment of active fishing.

Shad Fisherman **EXTRAORDINAIRE**

by Vic Attardo

*Shad angling expert
George "Pappy" Magaro*

GEORGE "PAPPY" MAGARO

is the closest a person can get to being a permanent fixture on the water. In 1995 he spent 51 days on the Delaware River angling for his favorite fish—the American shad. He can't begin to calculate how many hours that amounts to, but in checking his detailed log book, Magaro can tell you he landed 352 silver-sided fish last season and that, says the Bethlehem fireman, was during an off year.

While a lot of other shad fishermen were struggling to catch just a few fish in the low water and cold temperatures of last spring, Magaro, with his proven techniques and nearly religious attitude to his sport, was reeling them in nearly hand over fist. It is those techniques and his attention to detail that have won this angler the respect—and awe—of his peers. In a good year, of which 1994 was only the latest example, George caught 433 shad in just 41 days. And just so you don't think he's a complete shad superman, he happened to lose 143 fish that season—which is still a lot more shad than most fishermen have caught in a decade of fishing the Delaware.

If you have ever driven to Easton during the Forks of the Delaware Shad Fishing Tournament and looked over the stone wall at Easton's Scott Park, you have probably seen Magaro catch a shad. His is the red and white, 15-foot Thundercraft with the 48-horsepower Evinrude anchored above the railroad bridge at the confluence of the Delaware and Lehigh rivers. In recent years (since 1990) you may have noticed two downriggers hanging off the stern of his boat. Since using the depth-holding rigs, George says he has increased his catch by 70 percent.

Downriggers are only one of the techniques he uses to land great numbers of shad. George also knows tricks about anchoring and bending flutter spoons that most mortal fishermen know nothing about.

Partly from cabin fever and partly because he's just plain good at it, George begins his shad season a bit earlier than most anglers, sometimes as early as the third week of March.

Temperature, water condition

"I usually go by water conditions. If the water is clear I go out, but if it is high and muddy and filled with big debris, I don't. I'm still cautious about hitting the Delaware. It's not worth the risk."

Conventional wisdom claims that shad won't strike a lure until the water temperature is at least 50 or 51 degrees. But Magaro

Confluence of the Delaware and Lehigh rivers, Easton



has taken fish when the water temperature was as low as 48 degrees, as long as the shad can see his lure.

"I've caught them as early as St. Patrick's Day," he says.

Still, he says, if the shad have been biting but the water temperature drops, the fish will turn off. When the water temperature begins to rise, they start hitting. George has noticed that below 50 degrees he catches mostly bucks, or male shad. The females, or row shad, need the 50-degree mark to become aggressive, he believes.

As the season progresses, Magaro makes adjustments in his style and techniques, but early on he generally places his offerings about one to two feet off the bottom. Just as in setting up a retail business, location is everything to a shad fisherman and Magaro is a stickler for getting in the right spot.

Location

In his den he keeps a laminated photo made up of five pictures that have been taped end to end into one continuous scene. It was taken from the stone wall at the city park and shows the railroad bridge, the Jersey shoreline, the Lehigh and the new shad ladder below the Lehigh dam. Even as he casually shows the photograph to a visitor, one can see George recalling almost every shad he caught from each little square inch of picture. He has, he says, 12 locations at the Delaware/Lehigh convergence where he likes to fish. On any given outing he can motor his boat

downriver and by triangulating himself with land bearings, park himself right where he wants to be. His main objective is to fish the 12- to 15-foot deep channels that cut through the river as well as the edges of the channels. The shad will be in there somewhere, he knows.

Anchoring

When other fishermen talk about Magaro's abilities, one of the first things they mention is his method of manipulating his boat in anchoring. The basis of his system is the simultaneous use of two anchors. With one anchor placed at the bow portside and the other on the bow starboard side, he can change anchor lines to different cleats to move his boat four or five feet in one direction.

For instance, by moving his starboard anchor line to a port tie, he can maneuver his boat to port without having to motor up and lose his spot. Thus, if he's not getting fish initially because the shad are moving in a limited corridor, it's a simple matter to make the proper adjustment.

George also believes in double anchoring from the bow (never bow and stern) purely as a safety measure. One personal statistic proves why that's necessary.

"During the nine day (Easton) tournament, I was hit on six days by other boats," he says.

George says those accidents were caused by other boaters who failed to have enough anchor line or by not having enough weight on their anchors. A registered boating skills

"I sit there and experiment with colors and sometimes what holds for two days doesn't work at all on the third day. It throws a lot of theories out the window. No matter what color you use, the key is to get the lure in front of the shad."

"If you lose a shad on a barbless hook you gave him too much slack. More fish are lost along the side of the boat in the netting process than anywhere else."

instructor, Magaro knows that the normal scope—the length of anchor line—should be 7:1. In other words, if the water depth is 10 feet, the boater should have out at least 70 feet of anchor line. Even a ratio of 5:1 is marginal in the river.

Most of the hits his boat has sustained occurred when a wake lifted another boat off its anchor. To prevent this in his own craft, he uses an added weight above his three-foot anchor chain—half a coffee can of cement fixed with a D-ring. The added weight holds the chain low to the bottom.

Flutterspoons

Everyone always wants to know what George has on the end of his line that catches all those shad. For the most part, he uses flutterspoons. Magaro makes his own, of course, out of a short, but specific, materials list. The spoon is a hammered or preened size 1 that he purchases through a mail order tackle shop. The mail order company's product is a few millimeters wider than other company spoons and the extra width, he says, gives them a better shimmy. The hook is a gold Mustad 3960B, size 1/0. He attaches the hook to the spoon with a 60/40 acid core solder—"just enough to cover the hook eye." He then uses vinyl paint because it lasts longer and is more iridescent than other paints. In completing his lure he gives it about a 10-degree upward bend at the point where the shaft and blade meet. The blade is bent upward to add more flutter to the spoon.

Next to lure style, shad anglers always want to know what color spoons and darts are catching fish. It's a little like expectant parents yearning to know the sex of their baby. But George is not hung up on color. He works with a few favorites and occasionally gives the newcomer colors a try in case one is a winner.

"I sit there and experiment with colors. Sometimes what holds for two days doesn't work at all on the third day. It throws a lot of theories out the window. No matter what color you use, the key is to get the lure in front of the shad."

Still, his favorite combinations are chartreuse and green, chartreuse and orange, and pink and white. The chartreuse is the yellowish chartreuse as opposed to the greenish chartreuse. The darker of the two colors is always the head of the

dart or the dot or stripe on the spoon. In cloudy off-color water he uses a gold spoon, and on sunny days, a silver-backed spoon.

As the season progresses, George raises his downriggers farther off the bottom so that by the middle of April his spoons are usually swimming about three feet off the bottom. Not all schools of shad come through at the same depth, so he constantly studies his depthfinder to tell him where the fish are located and how far off the bottom they're swimming.

George's terminal tackle is relatively simple but effective. The end of his six-pound-test running line is usually placed through a 3/8-ounce egg sinker, but the size of the sinker can vary depending on speed and current. He then ties on a size 5 or 7 barrel swivel. Behind this he adds a leader of the same line weight. Two or more earless splitshot are placed close to the swivel on the leader. The splitshot are large, about 1/8-ounce, and he insists on round shot because the style with two flanges causes line twist, which should be avoided at all cost.

His downrigger release is a bobbin-shaped or piston-shaped device in which the line is lightly looped inside the ring. The release pull is smooth and quick. Of the 433 shad George caught in 1994, only eight were not caught on this setup using flutterspoons.

The following year, 1995, was a lot different. Last year was not a typical shad year for anybody. Things got going very early then, but during the usual shad fishing peak, it dropped off for weeks. The river was cold and low. People wondered where the shad had gone. A lot of anglers went home. Then the shad came.

George's record books help prove how strange a year it was. Between June 15 and July 7, when nearly everyone else was bass fishing, George caught exactly 100 shad at the Lehigh/Delaware confluence. And he caught them not from his boat with flutterspoons but with dart and flies from shore.

"The second run came along and almost nobody was fishing. Shad are so unpredictable what with water clarity, temperature, high water or low water. Guys were just giving up too early."

By mid-June the river was too low for his boat, so he stood on the banks of the Delaware and the shad were still arriving.

To catch a hundred shad from shore, he used both an 11 1/2-foot noodle rod with four-pound-test line and an 8 1/2-foot, 7-weight fiberglass fly rod. On the spinning rod he tied simple darts. His flies were made of metallic chenille. Noodle rods and fly rods are a shad story for another time. Suffice it to say that if the same low, cold water temperatures occur again this year, wait a while before putting away your equipment.

There are more tricks in George's hat that are worth mentioning. For one, he has given up on the improved clinch knot to make his line connections. He now uses the Uni-knot, also called the Duncan knot.

"I haven't had any shad break that knot," he says.

As for line, he swears by a clear or clear/green monofilament, mostly 6-pound test. If the water is fast, he uses 8- to 12-pound test. George doesn't use fluorescent lines.

There's also a neat trick he uses when reeling in a fish. During the fight he puts his rod tip in the water instead of holding the rod "like the Statue of Liberty."

"You will be surprised how much more control you have over the shad with your rod tip in the water," he says.

Recently he started jigging very gently with his flutterspoon on a flat line. Jigging the lure toward him, he then lets it fall back slowly while maintaining a tight line. For the last three seasons he has also been using barbless hooks—hooks that he crimps. Barbless hooks let him get the fish off quickly so there is more time to catch another one.

"The release is so much easier with a barbless hook. With a little flip it comes right out."

What about losing fish?

"If you lose a shad on a barbless hook you gave him too much slack. More fish are lost along the side of the boat in the netting process than anywhere else."

These are just some of things that 18 years of shad fishing have taught George "Pappy" Magaro. If you are willing to listen, he'll teach you what he knows. During the season, you can certainly ask him where the shad are at any given time, for his is the voice of the Delaware River Shad Fishermen's Association hotline (610-954-0577/0578). You see, a lot of people have talked to George and they don't even know it.

ANGLER

1996

EXPANDED

Trout Fishing

Opportunities

by Tom Greene



*Angler releasing a brown trout,
Tobyhanna Creek, Monroe County*

New waters

Connoquenessing Creek, Butler County. Located near Butler, a 6.8-mile section of stream from the outflow of Lake Oneida downstream to the SR 0356 bridge will be added to the catchable trout program this season. This water is scheduled to receive a preseason and an inseason planting of brown and rainbow trout.

Honey Creek, Lawrence County. A new 5.8-mile section from the Pennsylvania-Ohio state line downstream to the mouth will be added to the catchable trout program. This water will receive a preseason and an inseason stocking of brown and rainbow trout in 1996.

Little Muddy Run, Clearfield County. After an 11-year departure from catchable trout management, recent water quality improvements have allowed the return of this water to the approved trout waters list. For the 1996 season, a 4.0-mile stretch from the SR 0253 bridge downstream to approximately 1.0 mile upstream from the mouth will receive a preseason and an inseason stocking of brown and rainbow trout.

Leonard Creek, Wyoming County. A new 4.4-mile section from the Wyoming-Luzerne County line downstream to the mouth will be added to the catchable trout program in 1996. Brook, brown and rainbow trout will be planted for both the preseason and inseason stocking periods.

Masthoke Creek, Pike County. Located on Pennsylvania Game Commission property, a 2.2-mile segment of this stream will be approved for the catchable trout program in 1996. Stocking limits will extend between the upstream and downstream boundaries of State Game Lands 316. This water is scheduled to receive a preseason and an inseason stocking of brook, brown and rainbow trout.

Bushkill Creek, Pike County. An additional 3.0-mile stretch of stream from the outflow of Pickerel Lake downstream to the Lower Delaware State Forest boundary will be added to the approved trout waters list this season. This segment will receive a preseason and an inseason stocking of brook and brown trout.

Beaver Creek, Chester County. A new 3.0-mile section from SR 0030 downstream to the mouth will be approved for stocking in 1996. Preseason and inseason plantings of brown and rainbow trout will provide additional angling opportunity in this region.

Hares Valley Creek, Huntingdon County. The addition of this 2.0-mile section of stream from the Mapleton Sportsmens Club Nursery downstream to the mouth will provide new an-

gling opportunities in the Mount Union area. This water is scheduled to receive a preseason and an inseason planting of brown and rainbow trout.

Wheeling Creek, Dunkard Fork, North Fork, Greene County. After a six-year absence, improvements in water quality will allow this water to return to the catchable trout program. For the 1996 season, a 1.9-mile segment from the outflow of Duke Lake downstream to the mouth will receive a preseason and an inseason planting of brown and rainbow trout.

Wheeling Creek, Dunkard Fork, Greene County. Similar to the North Fork, a 3.6-mile stretch from the confluence of Wheeling Creek, Dunkard Fork, North Fork and South Fork downstream to the first bridge on SR 4003 at Durbin, will return to the approved trout waters list in 1996. This segment is scheduled to receive a preseason and an inseason planting of brown and rainbow trout.

Expansions to current waters

Classification changes and/or stocking limit extensions have led to an increased stocking program on the following waters:

Allegheny Creek, Berks County
Antietam Creek, Berks County
Bald Eagle Creek, Blair County
Beaver Creek, York County
Big Elk Creek, Chester County
Cowanesque River, Tioga County
Deer Creek, Allegheny County
East Branch Elk Creek, Chester County
East Branch Millstone Creek, Elk County
Gaylord Creek, Susquehanna County
Harbor Acres Lake, Butler County
Janesville Dam, Clearfield County
Little Schuylkill River, Schuylkill County
Muddy Run Rec. Lake, Lancaster County
Oil Creek, Venango County
Pennypack Creek, Montgomery County
Pickering Creek, Chester County
Pine Creek, Tioga County
Sacony Creek, Berks County
Salt Lick Creek, Susquehanna County
Shade Creek, Huntingdon County
Stone Valley Lake, Huntingdon County
Tulpehocken Creek, Berks County
Unami Creek, Montgomery County

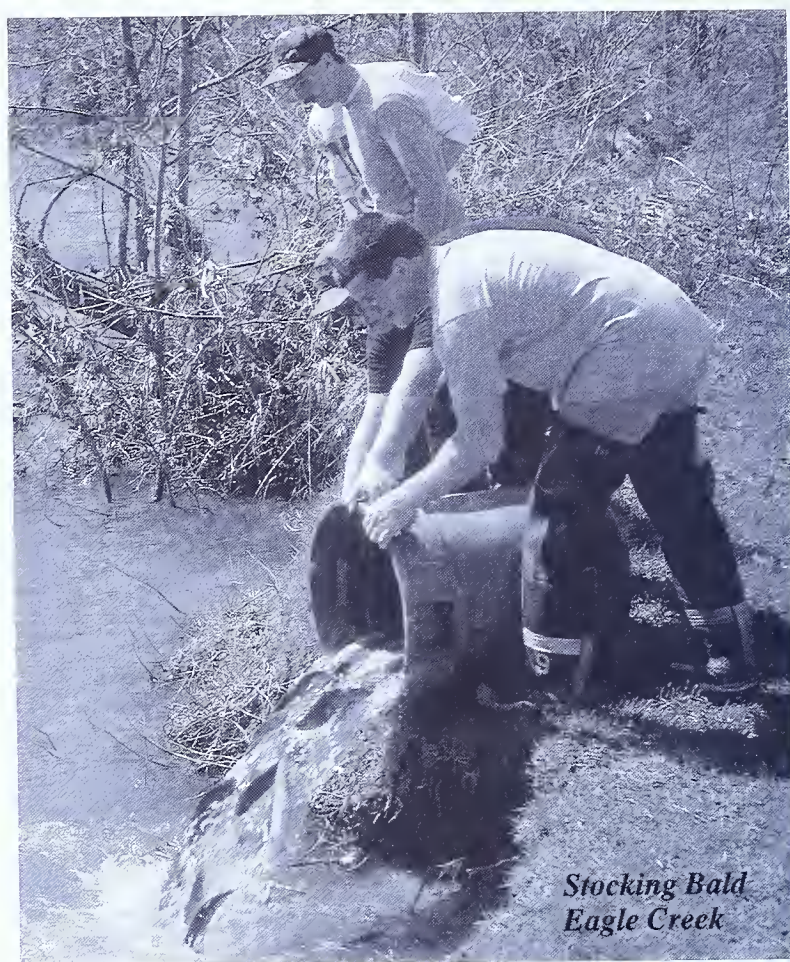
On behalf of the angling public, the Pennsylvania Fish and Boat Commission extends a sincere thank you to the landowners for granting the additional access to provide the new waters and extended angling opportunities.

New Delayed-Harvest area

Salt Lick Creek, Susquehanna County. In cooperation with private landowners, the Pennsylvania Game Commission and local sportsmen, a 1.6-mile section of stream will be added to the Delayed-Harvest, Artificial-Lures-Only program in 1996. The new area extends from T-638 to the downstream boundary of State Game Lands 35.

Early warning waters

South Fork Straight Creek, Elk County. Recent assessments have confirmed that a 2.2-mile section of South Fork Straight Creek supports an excellent Class A wild brook trout fishery.



Stocking Bald Eagle Creek

Therefore, stocking will be discontinued in favor of wild trout management.

Pohopoco Creek, Monroe County. Reinventory work conducted in 1993 and 1995 has confirmed that an 8.0-mile stretch of Pohopoco Creek supports an excellent Class A wild brown trout fishery. Stocking will be terminated for the 1996 season in favor of wild trout management. A total of 3.4 miles of this stream will continue to be stocked downstream of this section.

Little Lehigh Creek, Berks and Lehigh Counties. A combination of factors, including a good-density wild trout population, small stream size, and some posting and habitat-related problems have led to the removal of a 5.5-mile segment of this stream from the catchable trout program. Before 1996, stocking was limited on this section to preseason only.

Brownfield Hollow Run, Fayette County. Limited angler access from an excessive amount of landowner posting precludes the continuation of catchable trout management on a 1.4-mile section of Brownfield Hollow Run.

Loss of angling opportunities

The following waters will receive a reduction in their allocation for the 1996 season because of an increase in the amount of landowner posting. In many cases posting and the loss of angling opportunity are a direct result of poor angler behavior. I would like to remind anglers to conduct themselves accordingly when visiting our waterways to ensure that our current areas remain open to the general angling public.

Big Sandy Creek, Fayette County
Black Hole Creek, Lycoming County
Jackson Run, Warren County
Leibs Creek, York County
Quittapahilla Creek, Lebanon County
South Fork Bens Creek, Somerset County

ANGLER

Tom Greene is the Coldwater Unit Leader in the Commission Bureau of Fisheries.

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GOING, GOING, GONE!



Advanced Bait Fishing *for* Trout

by Mike Bleech





photo-Patrick O'Driscoll

photo-Mark Dauberman

The beauty of fishing is that you can be as serious or as casual about it as you please. There are so many trout in Pennsylvania lakes and streams that you can just plop some appropriate bait into a stocked water and expect to catch trout. If you have not had the opportunity to compare our trout fishing with that in other states, please accept this observation from someone who has—we have a bunch of trout. You do not need sophisticated fishing methods. But, and this is a big consideration, moving on to the next levels of fishing is an equation of efforts and rewards.

Moving on to advanced levels of baitfishing for trout calls for serious thought about fishing tackle, rigging, the baits, and how the bait is presented to trout. First, a brief look at tackle.

Tackle can make you a better angler

It seems a large share of the fishing articles in magazines that sell advertising these days read a lot like the advertisements. We are constantly bombarded in magazines and on television fishing shows that are nothing more than infomercials that we just gotta' have this or that new rod, or line or lure. Really, couldn't we do just as well with the same fishing tackle our grandfathers used?

No.

There have been some very helpful improvements in fishing tackle in recent years—among the tens of thousands of new things that sell mainly because they have catchy packaging, or slick pitch men. Of particular importance to trout anglers are the ultra-thin, low-visibility fishing lines. This does not include the braided lines. Regardless of their fine diameter, braided lines are clearly much more visible than ultra-thin monofilament. If you want to see an immediate improvement in the number of trout that take your bait, try an ultra-thin 2-pound-test line. Stick with clear or low-visibility green lines.

Longer ultralight rods are more common in tackle shops now than just a few years ago. When ultralight rods first became popular during the 1970s, manufacturers down-scaled them in every way, including length. This, in many cases, was a mistake. A short rod could certainly offer advantages when fishing through tight cover, but that is where the advantage of a short rod ends.

A long ultralight rod cushions the shock of a fighting trout, so you can land big trout on extremely light line. A long rod keeps line off the water while drifting bait. This prevents cross-currents from dragging the line and spoiling a natural drift. A long rod casts farther than a short rod, which comes in mighty handy at some lakes.

The other essential tackle for serious baitfishing is fine-wire hooks in various styles and sizes to match specific baits, an assortment of splitshot, concentrating on the smaller sizes, a few small bobbers, and a bait storage or carrying system.

Baits & rigging

Our trout stocking program is often called a "put and take" system. But today more and more anglers are opting not to take. Therefore, all of the rigging I suggest here is of the "quick strike" variety. That is, you set the hook as soon as you feel a trout take the bait. This results in mostly lip-hooked trout, so they can be released without serious damage. I urge you to carry forceps or long-nose pliers so you can remove hooks without handling the trout.

All of these rigs are what I term "clean rigs." This means that they use as little material as possible. This gives the bait a more natural appearance and balance.

Salted minnows are great bait for all trout, but especially for brown and brook trout. They are a lot easier to carry along streams than live minnows, and they keep a lot longer, especially if you store them in a refrigerator.

Many years ago I camped along the East Branch of Tionesta Creek with a couple of old-timers on the opening weekend of trout season. I carried worms, salmon eggs and a few spinners and spoons. Patches of snow still remained on shady slopes, so the creek was very cold. Fishing was slow. I had not caught a trout by late morning, when I saw one of my fishing partners for the first time since we started fishing. I watched him catch a couple of nice trout. Then he saw me watching.

"How's the fishing, Mike?" he asked.

After relating my sorry tale, he shared his salted minnows and a couple of wire harnesses with me, and in short order I caught a fine mess of brook trout.

The rig we used with those salted minnows 35 years ago is still as good a way as any to fish salted minnows today, if you can find them in tackle shops, or construct them yourself. It consists of a fine braided wire about 1 1/2 inches long with a small loop at each end. The wire is inserted in the mouth of the minnow, then out the vent. A small, about size 12, treble hook is attached to the ring at the vent, and the line is tied to the loop at the mouth. A splitshot just large enough to keep the salted minnow where you want it is pinched on the line about 6 inches above the bait.

When I was a kid we used live minnows only when we were after big trout. Then, most stocked trout were 7 to 9 inches long. Now, most stocked trout are big enough to be interested in live minnows, especially brook and brown trout.

Two rigging methods should handle all of your trout fishing situations. Lip-hooking is best in streams because it keeps the minnows in their natural position—nose into the current. This is also the way to hook them for lakes when you will keep the bait moving. But for still-fishing in lakes, I prefer to suspend the bait under a tiny bobber, with the minnow hooked just behind the dorsal fin, which suspends the minnow in a natural position.

In any case, lively minnows work best. Carry minnows in an insulated, aerated bucket, or a bucket with an insert that can be put in the lake.

*Many of our streams hold
20-inch browns. Some hold
30-inch browns. But the
only time these monarchs
leave their lairs is under the
cover of darkness.*

Advanced Bait Fishing for Trout



Angler working a brown trout, North Branch Tionesta Creek

Are kids growing up using scent-impregnated baits for trout today? I grew up picking worms along my way to the creek, turning over stones and logs, digging through rotting leaves. Red worms will tempt any trout, at the right time. As I learned about salted minnows, trout can be finicky. There are times when only one bait gets their attention. Sometimes it's red worms.

Lively worms will tempt far more trout than limp, dried out worms. Keep them lively in worm bedding, or loose dirt, both of which should be cool and moist. Clean the worms before using them. Trout do not eat dirt.

Instead of the usual size 6 bait-holder hooks, try a short-shank size 10. This small hook is easier to hide in the worm. Hook the worm near its middle, letting both ends dangle. Add enough splitshot to keep the worm close to the bottom during April, but by May when the water has warmed a bit you will prob-

If you want to see an immediate improvement in the number of trout that take your bait, try an ultra-thin 2-pound-test line. Stick with clear or low-visibility green lines.

ably do better without any splitshot, except in very deep pools.

Be sure to carry salmon eggs when fishing a stream or lake that has been stocked with rainbow trout, especially during the first few weeks of the spring trout season, or during fall. Salmon eggs are a natural food for rainbows during these seasons in their native range, and something in their genes must remind them of this.

For reasons we probably never will understand, trout seem to prefer one type of salmon egg or another over all others. This would be simple if they preferred one particular type all the time, but this is not the case. Sometimes one type of salmon egg is hot all through spring in an entire area. Sometimes the mood of the trout changes from day to day. Perhaps this was built into the grand scheme of things to entertain anglers. At any rate, when I am in rainbow trout water I usually carry at least three different types of salmon eggs, but one is always jumbo orange cheese eggs.

As with other baits, try to hide as much of the hook as possible inside the egg. If you do not have the appropriate size of salmon egg hooks, use two or three eggs on the hook, but no more.

Several kinds of grubs are sold as trout bait. When fishing gets tough, and nothing seems to work, I spend my time using grubs, especially in very clear water. During a memorable early June visit to the Lackawaxen River, I caught several nice trout early in the morning on small spoons. When they lost interest in the spoons I switched to some maggots that were left over from a bluegill expedition the previous day. I caught trout on them about as fast as I could get them in the water until I became bored of the sport because it was so easy.

Maggots, mousies, meal worms or wax worms, the grubs most often sold at bait shops, are not the kinds of grubs trout would naturally find, but they are close enough. They will usually catch trout even during the great insect hatches when fly fishermen usually enjoy most of the action.

Extremely low-visibility line is more important than ever when using grubs in clear water. This is the same situation faced by fly fishermen when they must use very light tippets. In fact, fine tippet material makes excellent leader for baitfishing with spinning gear. But to land even modest size trout on this light line, you need a long rod with about the same forgiving action as a fly rod.

Use a fine-wire size 12 or smaller hook, and hook the grubs in the tail section, away from their vital organs. This keeps them wiggling for a long time. Sharpen your hooks so you do not squash the grubs while hooking them. Keeping the grubs lively is what peaks their attractiveness to trout.

During summer after the major aquatic insect hatches are done, and the streams are low and clear, crickets and grasshoppers catch trout when otherwise you might swear there are no trout left in the stream. This is challenging fishing, though, requiring stealth, patience, and the ability to read the stream.

Rig crickets or grasshoppers by hooking them through the collar with a very fine-wire hook, about size 10. Do not use

any weight. It is best if this bait floats, though it is also effective underwater. Casting these light baits without additional weight is difficult. It takes practice. The casting ability of a long ultralight rod is a huge advantage.

Drift grasshoppers or crickets close to overhanging grass, and other vegetation. You may be surprised to find big trout in very shallow water feeding purposely on insects that fall from the vegetation. Often trout hide beneath the roots of clumps of vegetation.

You must approach streams in this situation with much greater stealth than is necessary earlier in the trout season. The trout that remain in streams by mid-summer are wary creatures that have eluded anglers and natural predators. Walk softly and keep a low profile. Don't be afraid to get down on your hands and knees.

For the biggest trout in the streams, nothing beats crayfish. A 6 1/2-pound brown trout I kept for my smoker contained 24 crayfish. Crayfish are abundant in most streams, and they provide a much more suitable meal for a big trout than tiny insects.

The best time to use crayfish for big, old browns is at night. Not many anglers have what it takes for this kind of fishing, which is the main reason many streams hold oversize browns. But if you are the kind of person who enjoys the eerie *who-who-whoooo* of a great horned owl, the kind who gets a rush of adrenalin from the sounds of an animal in the dark underbrush, you could be a big brown trout specialist.

Many of our streams hold 20-inch browns. Some hold 30-inch browns. But the only time these monarchs leave their lairs is under the cover of darkness. Concentrate on deeper pools with good cover. Do you know of any such pools that look great, but you can't catch a trout from them during the day? The presence of a big brown may be keeping other trout away.

Use small crayfish for trout. They do not need to be soft-shells. Hook them through the tail, with the hook point up. Do not use any additional weight, leaving the bait with a completely natural buoyancy. You can get away with heavier line in this situation, and you may need it to keep big trout out of snags.

Nightcrawlers are another great bait for big brown trout. They can be used for night fishing, but when I really like to use nightcrawlers is during or after rain, when the stream is getting cloudy. Cloudy water, too, is a manner of darkness, a form of cover. It brings the big browns out of their hiding places to feed on terrestrial creatures that are washed into the creek. Nightcrawlers are one of these creatures that naturally get washed into the stream.

Hook nightcrawlers through the collar with a short shank size 8 hook. Add a splitshot large enough to keep the bait near the bottom, but still drifting with the current. You can get away with using 10- to 12-pound-test line in cloudy water, which helps in handling big trout.

So you see, serious baitfishing for trout is just as complex, maybe more so, than other forms of fishing. But the rewards of learning various live-bait tactics are the ability to catch trout in any situation in which other methods work.



Highlights of the January PA Fish & Boat Commission Meeting

by Dan Tredinnick

Boating safety experts have often recommended that children wear lifejackets while boating. On Pennsylvania waters, that recommendation now carries the weight of law through regulatory action taken by the Commission. The Commission, which is the sole state agency charged to regulate pleasure boating, adopted rulemaking at its winter meeting which requires children age 12 and younger to wear approved lifejackets while underway on open waters aboard any boat 20 feet or less in length and on all canoes and kayaks.

The rulemaking is a major expansion of previously existing personal flotation device (PFD) regulations that applied only to children eight years of age and younger on Commission and State Park waters. The regulation goes into effect this summer.

The adoption of PFD regulations for children comes at a time when a national push for similar requirements is gaining strength. The National Transportation Safety Board and the National Academy of Pediatrics have both recommended that Congress and the states adopt such regulations.

The Commission also considered rulemaking that would have required all persons to wear PFDs while on small boats during the cold-water months of November through April, but decided against adoption.

Final rulemaking

In other action, the Commission adopted the following:

- Updates to reptile and amphibian regulations that clarify requirements for permits for the taking of timber rattlesnakes, place possession limits on frogs and snapping turtles as well as prohibiting the sale, trade or barter of native reptile and amphibian parts.
- Language making it clear that persons otherwise authorized by law may carry firearms on Commission property.
- Regulations changes for the mainstream Delaware River and its West Branch that move the opening day of walleye season for the stretch of the river between Pennsylvania and New York to the first Saturday on May, raise the limits on striped bass to two fish/28-inch minimum size and designate an eight-mile stretch of the West Branch as special-regulation trout water.
- Rewording of a current regulation that provides that only herring (except shad)

and catfish may be taken with long bow and arrow or spear on the Delaware River. Use of arrows and/or spears is prohibited within 275 yards of eel weirs.

- Removal of a restriction requiring "shoreline fishing only" on waters in the Late Winter Extended Trout Fishing Program.

- Rewording of a current regulation to clarify that it is illegal to possess fish while fishing in designated pollution zones.

- Special regulations for a 13.5-mile stretch of the Little Juniata River with no closed season, no tackle restrictions and a harvest period from mid-April through Labor Day during which two trout 14 inches and larger may be creel per day.

- Several changes to Lake Erie and tributary fishing regulations. Fishing for steelhead will be permitted year-round, with harvest of steelhead and salmon limited to three fish per day that are larger than 15 inches. The regulations also impose a 20-fish daily creel limit/eight-inch minimum size limit on perch.

- Regulatory language clarifying the need to display the Lake Erie Fishing Permit properly.

- An update of regulations concerning the use of trap nets for commercial harvest in Lake Erie. Most notable in the rulemaking is a new requirement that all walleyes caught out of season must be returned to the waters taken, regardless of condition.

- A modification to personal flotation device regulations to allow the use of certain non-Coast Guard approved flotation devices by operators of sculls and rowing shells on Commission and State Park lakes.

- Language specifying the Commission Executive Director's ability to set fees and regulations for the use of its marinas.

- Language explaining how to determine the state of principal operation for boat registration purposes.

- A change to require the estate of a deceased boat registrant to take action to transfer registration at the end of the current period of registration.

- The addition of the word "underway" to clarify current regulations on lights for boats.

- Wording making it clear that boat fire extinguishers must carry a Coast Guard approval number.

- Rulemaking stipulating that written boating accident reports must be completed and legible to meet legal requirements.

- Rulemaking specifying that boat operators involved in an accident must remain at the scene, exchange information with the other operator(s) and render aid if needed.

- A clarification to current regulatory language to specify that all motorboats should follow a counterclockwise traffic pattern whenever reasonably possible.

- Regulations mirroring federal requirements that mandate boat liveries must provide wearable personal flotation devices for everyone using their boats. Regulations requiring livery operators to provide rudimentary safety and operation instruction was also adopted.

- Special boating regulations were approved for four areas: Delaware River, Bucks County, where a Slow Minimum Height Swell Speed zone will be in place for the area of Lumberville from 12:01 a.m. the Friday before Memorial Day through midnight of Labor Day, and requiring Slow No Wake speeds while passing under bridge spans near New Hope during the same period with enforcement subject to enactment of a similar regulation by New Jersey; the restoration of wording outlining an electric motors only restriction for lagoons at Presque Isle State Park; a Slow, Minimum Height Swell Speed restriction on a portion of Fairview Lake, Pike County, and setting waterskiing hours of 10 a.m. to 5 p.m. on weekends and holidays on Long Pond, Wayne County. Waterskiing is also permitted there from 10 a.m. to sunset on weekdays other than holidays.

Proposed rulemaking

In addition to the above final rulemaking, the Commission also passed several items as proposed rulemaking. Public comment is sought on the following before a final vote is taken:

- A new regulation that would make it unlawful to target any species of fish for which the season is closed.

- The banning of personal watercraft on Laurel Lake, Susquehanna County.

- A 25-mile-per-hour speed limit on Harveys Lake, Luzerne County, from sunset to sunrise.





Pennsylvania Fish & Boat Commission

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Early Trout in the Shenango River Watershed

by Robert L. Petri

Sometimes we find what we are looking for in the least likely places. At first blush, the valley of the Shenango River in Mercer and Lawrence counties would not appear to be the place to go in search of early season trout fishing opportunities. This part of the Commonwealth is highly urbanized, and a lot of what hasn't been paved is part of some of the best farmland in the East.

However, things aren't always as they seem, and here on Pennsylvania's far western edge, there is good trout fishing to be found in the shadows of the factories and malls, and in the streams that are nestled in the wooded valleys that separate the farms. Many of these angling possibilities lie in the watershed of the Shenango River, which drains over 1,000 square miles of this part of the state. From the multi-faceted fishery in the tailrace of the Shenango River Reservoir to the

shaded flows of such popular area trout streams as Cool Spring Creek, Neshannock Creek and others, an early season trout fishery of surprising quality and variety awaits your inspection.

The most unique Shenango River watershed trout fishing locations are the 1.5 miles of the river itself below the outflow Shenango Reservoir, located just north of the city of Sharpsville. Brown and rainbow trout are stocked in the section of the river from the outflow downstream to SR 3025.

Flowing through the wooded confines of Sharpsville Recreation Park, this section of the Shenango is one of northwest Pennsylvania's largest trout waters. Averaging over 100 feet wide in most places, the river runs through a series of broad, shallow riffles and short, deep pools. The surrounding atmosphere of the park makes it easy to forget you are on the edge of

the busy Sharon-Farrell metropolitan area.

Fish & Boat Commission Area 1 Fisheries Manager Craig Billingsley is enthusiastic about the Shenango tailrace trout fishery. He notes that the river's large size and ability to hold high numbers of stocked trout help to provide a viable fishery in a densely populated part of the state. Additionally, Billingsley explains that as a dam release fishery, the stocked trout section of the Shenango stays open almost year-round to offer angling opportunities. The stocking strategy for the river has been fine-tuned to make the most of this fact. Not only are trout stocked during the traditional pre-season period, but also in the autumn as cooler water temperatures once again begin to prevail.

Of particular interest to the March angler is a set of special regulations in place on the stocked section of the Shenango. Unlike most stocked Commonwealth

Neshannock Creek near Volant

Early Trout in the Shenango River Watershed

streams, which close to angling the last day of February, the Shenango stays open until the first of April. A late-February stocking ensures that sufficient numbers of trout are in the river all through March, making the Shenango a good place to get a jump on the new season and strike the first blow against cabin fever.

If you are used to the normally smaller waters that lace our state and make up the majority of our trout fishing destinations, your first trip to a stream the size of the Shenango can be intimidating. How can you cover all this water effectively? Well, you can't, so don't try. As with all such waters, a good strategy is to fish the stream as if it were a succession of smaller waters. Look for sections of the river that resemble settings you are familiar with on your favorite home waters, and concentrate on them. By doing so, you will be much less overwhelmed by the size of the river, and you can employ the tactics and techniques that work best for you on smaller, more conventional waters.

Regardless of the size of the Shenango, fishing success here in March hinges on remembering the simple rules that apply to early season trout fishing everywhere. Concentrate your efforts on the slower, deeper runs and pools where the trout do not have to expend a lot of their energy to hold. March water temperatures generally hover in the low to mid-40s, and this means that the resident trout will be somewhat sluggish, and not particularly in the mood to chase your lure or other offering a long distance. Work the slack sections of water thoroughly, and keep your offering on or near the bottom. It is not unusual in colder flows for the same trout to make several passes at the same lure or fly before finally taking. If you miss him the first time, try again.

All the conventional early season baits work well on the trout of the stocked portion of the Shenango. Crawlers and redworms drifted deeply and close to submerged logs and other cover are par-



Brown trout from Cool Spring Creek, near Mercer

ticularly effective, as are mealworms and salmon eggs. Just be sure to get your offering on the bottom, where the fish are.

The spinfishing angler can do well here with spinners, small spoons and other lures with considerable flash. The stocked portion of the Shenango seldom runs completely clear, and cloudy water is the early season norm. Use spinners in bright shades of gold and silver, and retrieve them slowly along the bottom. The colder the water, the more effective a slower retrieve becomes.

There is very good fly fishing on the broad reaches of the Shenango tailrace, but it usually comes into its own a little later in the season when excellent hatches of a wide variety of caddis species makes an annual appearance. Nick Loprire is a past president of the Mercer County-based Neshannock Chapter of Trout Unlimited and an ardent fly fisher. He often makes his way over to the Shenango to fish over the prolific caddis hatches and rising trout of late April and May. According to Loprire, even though the best of the hatches occurs in the spring, action continues all through the summer and into October. Area Fisheries Manager Billingsley concurs with this assessment, calling the Shenango "very fertile water with excellent populations of caddises."

Access

Access to the stocked section of the Shenango is via PA Route 518, which skirts the north edge of Sharpsville. The entranceway to Sharpsville Recreational Park can be found just out of town, on a blacktop spur to the right, which leads to a bridge and the main entrance to the park. There is a sizable parking area here, from which you can explore upstream into the wooded reaches of the stocked section of the river. Access to fishing at the outlet of the dam itself can be had by continuing over the bridge a short distance to a parking area maintained by the Army Corps of Engineers. From here, it is a short walk down a path to the spillway of the Shenango Reservoir.

Stocked tribs

The trout fishery in the outflow of the Shenango Reservoir is only a part of what the watershed offers to the early season angler. The Shenango also has numerous stocked tributaries that are all worth a look. For the fisherman looking to jump the opening day gun, two streams in the Shenango watershed host special regu-

Brown trout caught on a dry fly in Neshannock Creek



lation areas where the fishing in March can be good enough to take an entire winter's chill out of your bones.

The best of these is the Delayed-Harvest, Artificial-Lures-Only area on Neshannock Creek near the Lawrence County village of Volant. Approximately 2.7 miles of the stream, from the mill dam just above Volant downstream to the covered bridge on Township Road 476, are included in the regulated area. This stream section is heavily stocked with brown and rainbow trout in the early days of March to provide a catch-and-release fishery where fly and spin fishers can hone their skills in preparation for the regular season opener.

The project water on Neshannock Creek is characterized by gentle riffles, long pools of moderate length and ample amounts of in-stream cover. The creek averages about 50 feet wide in this section, and despite fairly heavy angling pressure, you can usually find a pool or two to call your own even during the busiest weekends.

The March fly angler can have his best luck by going deep after the Neshannock Creek project fish. Weighted nymphs like

the Black Stone and Hare's Ear work well in sizes 10 to 16, as do caddis larvae imitations in cream and olive in the same sizes. Woolly Buggers in shades of olive and black are very effective here when drifted deep along the steep banks and beside the many large rocks that dot the streambed in many sections. The best access to the Neshannock Creek Delayed-Harvest project is via PA Route 208, which crosses the stream at Volant at the head of the project. From here, an abandoned railroad grade follows the creek downstream to provide walk-in access.

Even though the Neshannock Creek project is the place to be in March, there is much more to this waterway waiting for anglers after the regular season opens in April. Just under 20 miles of the stream are stocked with brown and rainbow trout over a continuous section from the south edge of Mercer downstream almost into New Castle. This long stretch of water helps spread some of the early season pressure out and can in many cases allow you to find a place of your own, away from the worst of the crowds.

Most of the stocked section of

From the multi-faceted fishery in the tailrace of the Shenango River Reservoir to the shaded flows of such popular area trout streams as Cool Spring Creek, Neshannock Creek and others, an early season trout fishery of surprising quality and variety awaits your inspection.

A late-February stocking ensures that sufficient numbers of trout are in the river all through March, making the Shenango a good place to get a jump on the new season and strike the first blow against cabin fever.

Neshannock Creek is easily accessed from major highways. In the Mercer to Volant section, US Route 19 provides one direct access point, and leads to a number of secondary roads that cross the stream. From Volant to New Castle, the best access is via PA Route 956 at Neshannock Falls and along numerous secondary roads that leave PA Route 168 to meet the stream.

The other good bet for March trout action in the Shenango watershed is in the Delayed-Harvest, Artificial-Lures-Only project on Cool Spring Creek near Mercer. The Cool Spring project extends about 1 1/4 miles from the SR 2014 bridge just off PA Route 58 south of Mercer upstream to an abandoned railroad grade. Brown and rainbow trout are stocked here well in advance of opening day to offer the March angler a chance to get out and limber up before opening day.

Cool Spring is a moderate-sized stream with a gentle gradient. There are numerous slow pools here framed by high banks and a good amount of instream cover in the form of sunken logs and other debris. Area Fisheries Manager Billingsley gives a slight edge to Cool Spring over Neshannock Creek as trout habitat, citing the stream's smaller size and better shading, which, he explains, allows for better holdover of stocked fish.

Visitors to the Cool Spring project waters will find evidence of yet another waterway where volunteer conservationists and fisheries management professionals have joined forces to protect and enhance the resource. For the better part of the past decade, the Cool Spring special reg area has been cared for by the Neshannock Chapter of Trout Unlimited operating in cooperation with the Habitat Management Section of the Commission under the auspices of the "Adopt-a-Stream" program. According to Neshannock TU principal Nick Lopriore, the chapter has built a number of instream deflectors on the project to enhance habitat. The chapter also operates an annual float stocking to spread the trout out over the length of the project.

Tactics

Early season fishing on Cool Spring calls for tactics similar to those suggested for the Neshannock. Work the slower sections of the stream thoroughly with medium-size nymphs and Woolly Buggers. Caddises are the dominant aquatic insect in both streams, and a caddis larva in tan, olive or cream in sizes 10 to 16 can be very effective. The spin fisher will do well with smaller spinners and jigs worked slowly through the deeper pools and around cover. As with all cold-weather trout fishing, slow and deep presentations are the keys to success on these Shenango Valley streams.


For anglers willing to wait until opening day, Cool Spring Creek offers approximately another three miles of stocked water under open regulation, in addition to the Delayed-Harvest area. Approximately five miles of the stream, from the mouth near Mercer along Route 58 upstream to the US Route 62 bridge, are stocked with brown and rainbow trout. Both these highway bridges offer good access to the open sections of Cool Spring.

Even though the Shenango tailrace, Neshannock Creek and Cool Spring offer anglers an opportunity to get some fishing time in during March, and continue to provide good fishing through much of the season, there are other waters in the region that are also worth a look. The Little Shenango River offers 12 miles of well-stocked water from the Mercer County village of Hadley downstream to the mouth at Greenville. PA Route 358 west out of Greenville offers the best access to this medium-size stream.

Small-water suggestions

In addition, Billingsley has a number of smaller water suggestions, all of which are good places to spend some early season time in a setting perhaps somewhat less crowded than that found on the Shenango tailrace or Neshannock Creek. Among these are Mill Creek, a tributary to Cool Spring at Mercer, Pine Run, also near Mercer, and the West Branch of the Little Neshannock Creek off PA 318 near the

Mercer County village of Bethel. These waterways are quite small, but are well-stocked to provide good early season angling.

There is indeed more to the trout waters of the Shenango valley than what at first meets the eye. You can experience very good fishing within a stone's throw of the city lights of Sharon in the tailrace of the Shenango Reservoir in the morning and spend the afternoon on a gentle section of the Neshannock nestled in an oak-filled hollow, where the only disturbance is the occasional rumbling clip-clop of the passing Amish buggies. Throw in the preseason angling opportunities offered by the special reg waters of the area and you have a combination that can be hard to beat. 

Warmwater Potpourri

Area Fisheries Manager Craig Billingsley was enthusiastic about the trout fishing available in the Shenango Valley, but he had even higher praise for the exceptional warmwater fisheries of the area. From smallmouth bass to walleyes to panfish and even striped bass, the valley has it all.

Billingsley noted that there is very good angling for walleyes in the main stem of the Shenango from the dam downstream, and that almost as many folks ply these waters for walleyes as they do for trout. He also noted that while the Shenango has good smallmouth fishing all the way from Pymatuning to Sharon and beyond, the best bass fishing the river has to offer seems to be in the section immediately above the Shenango Reservoir and well downstream from Greenville. He also cited the section of Neshannock Creek from Volant to New Castle as one of the "best kept bass secrets" in his region, with excellent smallmouth populations.

Indeed, on a recent visit to the Neshannock Creek Delayed-Harvest area, I was greeted in one particularly deep pool with the sight of at least 10 smallmouths hanging suspended in the flow. The smallest was perhaps 16 inches—a good bass anywhere.

Nick Lopriore also chimed in with some interesting information. As a result of the introduction of striped bass into the Shenango Reservoir, good numbers of these fish have made their way into the river below the dam. Lopriore noted that friends have reported taking stripers up to eight pounds in the pool at the outflow of the dam.—RLP.

On the Water

with Robert L. Petri

"Doing Any Good?"

Wherever you go on Pennsylvania's vast network of waterways, you will hear the question. You might be stalking a rising fish on a secluded stream, or sitting in the warmth of the spring-time sun along the banks of the Little Juniata or bobbing along on a leisurely drift over a vast weed bed on Presque Isle Bay. It doesn't matter. Soon enough, the voice will come from behind or alongside you. A smile, a wave and the question "Doing any good?" It is the all-purpose angler's greeting.

Not everybody takes kindly to being interrogated by some stranger when they are trying to fish. Some anglers just want to be left alone so they can concentrate. They get asked enough questions at work, or in their day-to-day lives. When you ask these folks how they are doing, you might get half a grunt or maybe just a withering look. I understand about privacy and solitude. I nod and move on.

Sometimes, though, asking the question opens a door and you make a new friend, or learn a lesson you can use in your life off the water. These are the kinds of encounters that keep me asking the question.

Just below the bridge in downtown Mifflintown, the Juniata River glides along over a bed of basketball-sized rocks and larger boulders. It is a good place to prospect for smallmouth bass with small surface lures after the heat of the day has relented and the sun falls behind the ridge line.

As I eased out into the flow and began to watch the water for the telltale eruptions of bass shagging schools of minnows, I noticed an elderly gentleman a few hundred feet downriver from me. He wasn't fishing very hard. He would cast and retrieve, then place his rod under his arm and gaze out at the river and then up at the sky where the bright blue of the day was slowly giving way to the silver gray of evening. My curiosity was piqued, and I slowly made my way toward him.

"Doing any good?" I inquired. "Nothing to speak of, a couple of hits," he replied. "That's OK, though," he continued. "I'm just glad to be here." My expression must have told him that I didn't quite understand. He smiled and explained that he had undergone multiple coronary bypass surgery during the previous winter, and that it had been a very near thing. Touch and go on the operating table for a while. "I don't worry so much about catching a lot of fish anymore," he said. "Every new day is another gift. The fish are just a bonus. Isn't the river beautiful this time of day?" I said that it surely was, wished him well and returned to my station upriver in the fading light, not so much to fish as to watch the sun go down.

At least once each season I make a point of going head to head with the tough browns and rainbows that inhabit Fisherman's Paradise on Spring Creek. This is a particularly good place to

go if you have lately been on an angling streak where you could do no wrong, and you have decided that trout are vastly overrated as adversaries. The trout of the Paradise will set you straight on this matter. They are equal opportunity dispensers of humility.

All along the brushy bank just upstream from the parking lot by the Stackhouse School, good brown trout hung suspended in the current, occasionally drifting up to intercept a stray ant or midge. It was business as usual. The first five fish I worked to either paid absolutely no attention to my fly or else they came up and drowned it in a gesture of contempt.

The sound of footsteps along the road that runs tight to the bank made me look up. A disconsolate-looking angler was making his way back to his car. "Doing any good?" I piped up, bright and chipper. "Naw," he replied. "I might have had one hit up above." We talked for a few minutes and he explained that he was new to fly fishing and wasn't real sure what he was doing. I reached into my vest of a thousand pockets and pulled out a big box of terrestrial imitations. "Try these," I suggested, and gave him two or three of the big deer hair ants I am never without.

Just as he was turning to be on his way, a good trout broke the surface about 25 feet upstream. "Wow, there he is!" He said. What followed can only be described as providence at work. I knotted one of the big ants to my leader and proceeded to execute the kind of cast I make maybe 10 times a season—dead on the mark and light as a feather. The fish rose and took. As I brought him to hand and released him, it was a tossup on which of us was more shocked. "See how easy it is?" I said, tongue firmly in cheek. "Wow" was all he said. I went fishless the rest of the afternoon, but I surely enjoyed meeting him.

Sometimes when you ask the question, you get an answer that you can take with you and always hold—a defining insight from the angling life. I got such a response early last March while chasing steelhead in one of the windy canyons that cradle Elk Creek on its way to the big lake.

I rounded the bend and saw an angler working a deep run along a downed log. A surly sky was throwing intermittent waves of half-frozen rain down upon the land, and the wind bored directly into my bones. It was perfect steelhead weather.

I sauntered up to the angler and posed a slight variation on the question: "How's the fishing?" He never missed a beat. He looked at me, and with a single drop of rain hanging from the tip of his nose, he explained that the "fishing" was *always* good. It was only the "catching" that varied from time to time. Truer words were never spoken, and I repeat them to anyone who will listen, every chance I get.

For Fish, Flood's Effect is on a Different Scale

While many communities and individuals across Pennsylvania floundered in the wake of devastation wrought by the Flood of 1996, the rushing streams and rivers are little more than an inconvenience for some populations accustomed to water in their homes—fish populations. Although it may be hard to imagine for those of us who witnessed the floodwater's power, in terms of catastrophes, finned creatures view recent events on a different scale. For fish it's simply a matter of adjusting to go with the flow.

Commission Fisheries Management Division Chief Richard A. Snyder says that a flood is a natural event and Mother Nature equips her charges well to deal with it. According to Snyder, high water may alter aquatic habitat and place some physical stress on fishes, but for the most part the effects are short-term.

"To a fish, a flood is like our walking up an alley during a strong windstorm," Snyder says. "Fish react in pretty much the same manner as we would—we'd duck into a doorway to get out of the wind, and fish seek out those areas where the force of the water isn't as great."

Though some fish may be permanently dislocated during a flood, most manage to take refuge. Areas of refuge can be as simple as a stream bottom where water moves more slowly. Rocks and logs offer shelter, and calm eddies out of the torrent provide congregation points for fish to rest. Fish find these places even if the pools are located in areas where they wouldn't normally be found, such as over a road or in a pasture.

As floodwaters recede, fish find their way back to their usual holding spots, though Snyder notes that if the water recedes quickly, puddles and sinkholes can leave fish stranded.

Adult fish tend to fare better than juveniles. For that reason, the most recent flood is likely to affect some species more than others. Hardest hit are probably those streams with naturally reproducing or "wild" trout populations. Trout lay their eggs and spawn in the fall, so many recently hatched fry probably did perish. Other species, such as bass, will be less affected because they won't spawn until later this spring when, presumably, waters will be at normal levels.

Even though fisheries biologists such as Snyder will be able to note the loss of

juvenile wild trout when they survey waterways, most anglers may not notice. Barring other natural catastrophes, subsequent year classes of wild trout will fill any voids.

It appears that the Flood of 1996 won't significantly affect the Commission's stocked trout programs, either. Two Commission hatcheries did experience some flooding: Tylersville Fish Culture Station, Clinton County, and Reynoldsdale Fish Culture Station, Bedford County.

At Tylersville, flood waters overtopped the bottom sections of eight concrete raceways. The raceways were holding adult trout to be released for the 1996 season. It does not appear there were significant fish losses.

"Normally what happens is that those fish hunker down and hold in the raceways even though there is an opportunity for them to swim out," says Dennis Ricker, Commission Trout Production Division Chief. "It is easier for them to stay in the relative comfort of a raceway than work against the main current. If we did lose a large number of fish, then yes, there would be some effect on our ability to meet our stocking projections. The fish in the raceways were adult fish scheduled for stocking during March, so we won't be able to replace any that we did lose."

Tylersville's hatch house, which was holding fingerling trout, and the attached offices suffered more extensive flooding and damage, Ricker says.

"Practically everything—furnishings, computers, desks, copiers and great volumes of records—was damaged or destroyed. Fingerling trout were scattered everywhere. You'd open a desk drawer and find some in there."

Because the fingerlings weren't to be stocked until 1997 when they would be adult size, production levels can be made up with fish from other Commission stations.

The flooding at Reynoldsdale was minor in comparison. There was no structural damage to the facility itself, and even though some earthen raceways there did flood, Ricker estimates losses at no more than 400 to 500 trout.

Other stations suffered no problems, and stockings as part of the Late-Winter Program resumed quickly.

What anglers may notice are some physical changes to trout streams and other

waterways. "Many streams and rivers have been physically altered during the course of the flood," Snyder says. "Gravel and rocks have been swept downstream. Stream banks have been washed away and silt has been redeposited in different locations. Some areas that may have been prime fish habitat before are now gone altogether. Other areas that weren't ideal before may have been scoured and look just great."

"This is certainly going to rearrange things from what we are accustomed to. Ironically, the fish will probably adjust quicker than anglers. We'll just have to work a little harder to find the new hotspots."

Even though the experts are still tabulating a final price tag on disaster damages from water, ice and mud, the bottom line for fisheries is a little clearer. Indeed, things are already well on their way toward normalcy in the piscine world. "Short of reading about it somewhere, a few years from now it will be nearly impossible for us to tell there even was a flood," Snyder says.—*Dan Tredinnick*.

Commission Equipment Auction

On Saturday, April 27, 1996, the Fish & Boat Commission will hold an auction of used boats, motors, trailers, boating accessories and other maintenance equipment at Fort Indiantown Gap, Route 934, Lebanon County. A preview of the sale items will be held from 9 a.m. to noon. The auction begins at noon and will take place rain or shine.

The terms of the sale include full payment in cash or by personal check. No credit cards will be accepted. There is a 10 percent buyer's premium for all sales, and six percent sales tax will be collected. All sales are final.

A list of items to be auctioned will be available after February 1, 1996. To receive a list of items and an auction location map, please send requests with a business-sized self-addressed, stamped envelope to: Equipment Auction, PA Fish & Boat Commission, Bureau of Law Enforcement, P.O. Box 67000, Harrisburg, PA 17106-7000.

Special Permits for Persons with Disabilities

The Commission is making access to fishing and boating opportunities easier for persons with disabilities through a permitting procedure that allows the use of certain off-road vehicles and mechanical fishing devices for qualified individuals.

To preserve and protect lands owned by the Commission, the use of off-road vehicles such as trail bikes and all-terrain vehicles (ATVs) is generally prohibited on agency properties. However, these same off-road vehicles, when properly used, may provide safe and convenient transportation for persons with disabilities. Thus, the Commission has implemented regulations to improve access to its lands and waters to those individuals.

Similarly, the agency has adopted rulemaking that opens the door for qualified disabled anglers to use crossbows and mechanically propelled spears and gigs to pursue certain species of fish like carp and suckers.

Those with an interest in obtaining a Special Permit for Persons with Disabilities can receive complete details by contacting: Director, Bureau of Law Enforcement, Pennsylvania Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.



Commission Executive Director Peter A. Colangelo awarded the first Special Permit for Persons with Disabilities to Stan Courtney of Newport in a brief ceremony at agency headquarters in Harrisburg, last January.

Cast and Caught



Fifteen-year-old Jay Sabik caught and released this lake trout while fishing on Lake Erie. The monster fish, caught on a crankbait, was 39 inches long. Its weight was unknown—by its looks, though, it may have been a contender for state record.



Dover resident Ted Chutter was fly fishing on the Susquehanna River at York Haven when this carp hit his minnow-imitation fly. The fish weighed 18 1/2 pounds and was 33 inches long.

Water Safety Festival at Blue Marsh Lake

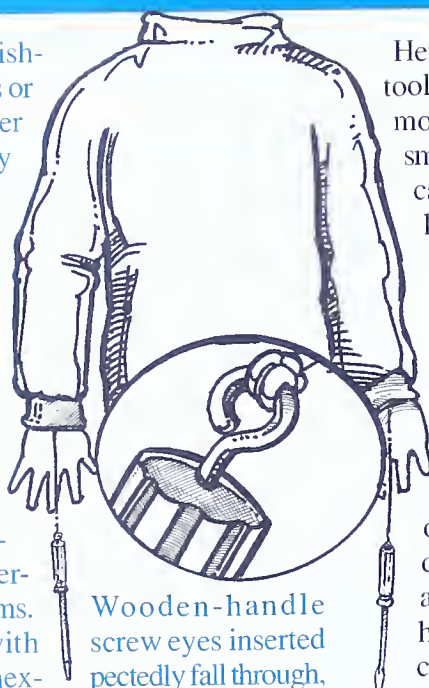
On Sunday, June 9, 1996, the U.S. Army Corps of Engineers at Blue Marsh Lake will hold its Ninth Annual Water Safety Festival, a fun and educational family day that focuses on the theme of water safety. The festival ends a weeklong observance of National Safe Boating Week. There will be numerous demonstrations throughout the day. The Hershey Medical Center Lifeline helicopter will be available for inspection, and children will have an opportunity to meet the U.S. Army Corps of Engineers district mascot for safety "Safe T. Squirrel." Visitors can also

try their skills at casting a fishing line and throwing a rescue bag. There will be a large variety of other displays including B.A.S.S. clubs, search and rescue units, emergency rescue equipment, scuba diving and recreational watercraft. Some 25 to 35 organizations and agencies are expected to participate. Tours of the dam and control tower will also be offered throughout the afternoon. The Fish and Boat Commission will have law enforcement, boating safety education and aquatic education displays and activities.

Festival activities begin at noon and end at 6:00 p.m. following the finale water ski show. During the ski show different kinds of water skiing will be demonstrated, including "tricks" and barefoot skiing. The festival will be held at the Dry Brooks Day Use Area (where the swim beach is). Blue Marsh Lake is located in Berks County, northwest of Reading. It can be reached by turning south off I-78 Exit 7 onto Pennsylvania Route 183. Call Blue Marsh Lake for more information at (610) 376-6337.

Angler's Notebook *by Seth Cassell*

Although most ice fishermen know when ice is or is not safe, you can never be too careful, especially now at the end of the season. When an unexpected breakthrough occurs, it is difficult for an angler to pull himself out of the frigid water. One emergency measure is to tie two screwdrivers or awls together and keep them draped over your shoulders beneath your outerwear and down your arms. screwdrivers work with into the end. If you unexpectedly fall through, you can use the screwdrivers to dig into the ice and help pull yourself out of the frigid water.



Wooden-handle screw eyes inserted

Nothing can ruin an early season fishing trip like a pair of leaky waders. Most wader holes are discovered during the first outing of the year, after they have been stored for several months. To avoid a chilly influx of water, before heading out, test your waders in a bathtub. Fill up the tub and trap air in your waders. Then submerge your waders in the water and watch for air bubbles, which indicate a hole that needs to be repaired.

A common nuisance for anglers is keeping water out of their canoes. Lifting anchors, landing fish and paddling contribute to the unwanted water. Most times, there isn't enough water to collect with a bucket. A large sponge works well. If you want to remove some water, simply absorb the water and then squeeze it out overboard. Keep the sponge stored neatly under the gunwale with bungee cord.

Hemostats, the medical instruments, are great tools for any angler. They are useful for removing deeply lodged hooks, especially on smaller species such as sunfish and trout. They can also be used to crimp down barbs and hold small flies for tying. Hemostats can easily clamp onto your favorite fishing vest, and can be purchased at most tackle shops in a variety of sizes and configurations.

When dry fly fishing for trout, avoid casting your fly where you see the rise. Instead, cast a few feet beyond it. When feeding off the surface, trout come out of their holding spots and inspect a fly, often drifting a few feet before engulfing it. Then, afterward, they swim back upstream to their holding spots. So where you see the rise can actually be a few feet downstream from where the trout is holding.

Now is a good time to start organizing your fishing tackle for the season. Not only will it cure a bad case of cabin fever, but it will also make you a more organized angler, and possibly a more successful one. Make an inventory of what you have, and then when you head to the tackle shop, you know exactly what you need to purchase. Also, sharpen dull hooks, and replace rusted ones that are beyond repair. In addition, it is always a good idea to add new line to your reel spools.

Monofilament, when stored properly, can last a long time. Avoid keeping it in heated areas or in direct sunlight for extended periods (on the dashboard of a car, for example). Instead, store the spools in a cool, dark place. This best ensures the longest life of your line.

Illustration - Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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SMART

Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

Stoneflies

The scientific name for this order of insects is *Plecoptera*, which in Latin means "braided wing." The wings of adults have numerous veins, making them appear braided. Stoneflies, as you can guess, live in habitats with plenty of stones. They prefer fast-moving, clear streams with a bottom of rocks and stones. Small mountain brooks and large streams in wooded areas usually have plenty of this type of habitat, and often many stoneflies.

Stoneflies, like mayflies, have incomplete metamorphosis. The stages of incomplete metamorphosis include egg, nymph and adult, or "ENA."

Nymph

Stonefly nymphs have two tails and two sets of wing pads or plates. They also have gills on the middle body segment near their legs. Mayflies may have two tails, but their gills are on the last body segment. The nymphal stage of most stoneflies is one year. There are a few species here that take as long as three years to mature. Stoneflies crawl about and cling to the rocky bottom, sheltered from the current. In small streams, many species feast on leaves falling from streamside trees. In larger waters they graze on other aquatic vegetation, like that slime or the scum that covers rocks. There are some stoneflies that are predatory.

Hatching

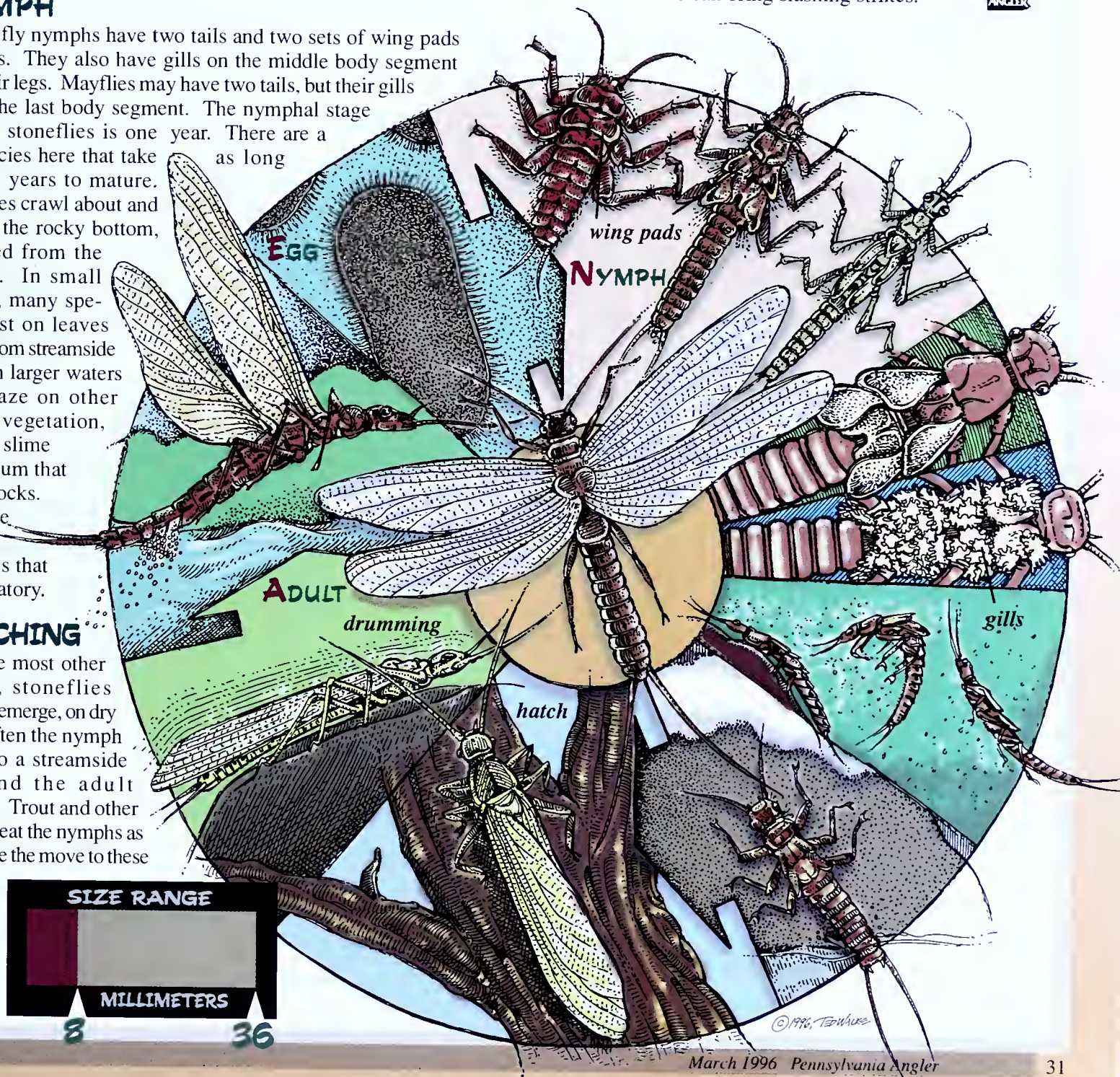
Unlike most other insects, stoneflies hatch, or emerge, on dry land. Often the nymph crawls to a streamside rock and the adult emerges. Trout and other fish may eat the nymphs as they make the move to these places.

Adult

The wings of adult stoneflies fold back flat over the body. Caddisflies also have "laid back" wings, but they almost form a tent over the body. After hatching, the adults fly to streamside vegetation, where they may live from a few days to a few weeks. Many adults do not eat, but those that live as adults longer do eat vegetation, pollen or nectar.

The adults attract mates by "drumming"—bouncing up and down on their vegetation perches. They mate on this vegetation and the female takes the fertilized eggs to the water to deposit them. She may skate across the surface, dropping egg packets. This is often when trout eat the adults. A bushy dry fly skated across the surface at this time can bring slashing strikes.

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Straight Talk

Opening Day

When the morning dawns April 13, the rising sun will illuminate a special sight: the opening of the 1996 trout season. Nearly a million anglers are expected to line the banks of some 800 stocked trout streams and the shores of more than 100 stocked trout lakes. Some will be youngsters, making their first tentative casts with shiny fishing poles fresh from the package. Others will be wily veterans, skillfully handling their trusty old rods. Lots of people like to fish for trout. In fact, 3 out of every 4 licensed anglers say they fish for trout. Parents and children, homemakers and businessmen, students and teachers all fish for trout. The greatest number of trout anglers live in urban areas like Pittsburgh, Philadelphia, Harrisburg, Erie and Allentown. However, anglers who live in rural areas trout fish more often. A Fish and Boat Commission phone survey has shown that trout anglers average 20 years of fishing experience. Many have been fishing for much longer, but that also means plenty are new to the sport.

Despite their many differences, opening day trout anglers all share one important thing in common: Excitement. In Pennsylvania, opening day is almost an unofficial holiday. Vacations and work schedules are planned around the first weekend of trout season. And rarely does a year go by when we don't receive a call at our offices from a recently engaged couple wanting to ensure their wedding won't conflict with the other "big day." It's been that way for a long time and every year we work hard to ensure that it stays that way.

This year the Fish and Boat Commission will stock 4,784 miles of streams and 5,320 lake acres in preparation for opening day. A total of 2,346,900 trout will be released, including 928,740 brown trout, 807,600 rainbow trout and 610,560 brook trout. Additionally, an estimated 250,000 trout will be stocked by the Cooperative Nursery Branch. In all, some 2.6 million adult trout will be planted in time for the opener.

Opening day is an important time for trout anglers, a time to pass on enduring traditions. Some 77 percent of trout anglers are married and almost half (44 percent) have children living at home. Opening day is the time when many go fishing as a family for the first time. Long-time anglers have their traditions, too. Just ask: They all have preferred streams and on those waters, favorite holes. Opening day often arrives with damp and chilly weather, but that rarely disturbs the traditionalist. They gather around thermos bottles of coffee and steamy mugs of cocoa and talk about opening days that have long passed, building their enthusiasm for the 8 a.m. start that is about to come.

A strong majority of trout anglers, 72 percent, say they believe the tradition of opening day is an important part of the trout fishing experience. Also, 59 percent said they did not want to see opening day eliminated and replaced with year-round trout fishing.

Often overlooked in the trout season hoopla is another significant tradition: The longstanding practice by thousands of riparian landowners who allow free public access to their properties. Without the generosity of these private landowners, opening day as we have come to know it would not be possible. Many of the streams that the Commission stocks run through privately held lands. If these lands were posted, the waters would not be stocked and many of the fishing opportunities anglers take for granted would not be possible.

Unfortunately, recent years have brought a growth in the number of closed waters. Angler abuse of their access privileges is cited by landowners as the single greatest reason for increased stream posting. Sometimes, thoughtless anglers leave behind trampled stream banks, bait containers, and piles of cans, sandwich wrappers and other trash.

To protect the future of trout fishing, why not start a new tradition this opening day? Take time to thank the owner of the land on which you fish. In addition, take someone new to angling and make sure the new angler respects private land and understands angling ethics. And when you leave, take along two limits: A stringer full of fish and a trash bag with your refuse and any other litter you come across. You'll be helping preserve an important piece of Pennsylvania heritage.



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*Executive Director
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Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

Blue Marsh Lake Stripers by Vic Attardo.....	4
It's Hendrickson Time! by Charles R. Meck.....	7
The Moving Trout by Robert L. Petri.....	10
Pennsylvania's Best Carp Fishing	13
On the Water with Robert L. Petri	14
The March Brown Dun by Walt Young.....	15
Fishing for Stocked Trout in Southeast Pennsylvania by Mike Bleech.....	17
Bass Season/Harvest, Targeting Proposals Withdrawn	20
PA Fish and Boat Commission Publications List	21
Shenango Lake: Hotbed for Crappies by Darl Black.....	23
Notes from the Streams	28
SMART Angler's Notebook by Carl Richardson.....	31

This issue's front cover is the 1996 trout/salmon stamp artwork. The stamp features Harvey's Creek, Luzerne County, depicted by artist Robert Kray. This stamp introduces a new series of stamps that features the state's world-famous trout streams.

Opening Day's Best Bets

Commission Coldwater Unit Leader Tom Greene has a few suggestions on where to wet a line this opening day. His suggestions include waterways from each of the Commission's eight fisheries management areas.

Conneaut Creek, Crawford County, is stocked preseason with some 4,700 fish for 13.6 miles. Kinzua Creek, McKean County, receives some 16,500 trout preseason and is stocked over 20.5 miles. Centre County's Bald Eagle Creek is stocked for some 26.9 miles and receives a preseason allocation of 15,650 trout. The Cowanesque River in Potter and Tioga counties is stocked for some 11.4 miles and gets 6,400 trout preseason.

Lehigh County's Jordan Creek is stocked over 23.9 miles and gets a preseason allocation of 15,300 trout. In Berks and Lehigh counties, Maiden and Ontelaunee creeks combine for some 14.1 miles of stocked water with a total combined preseason allocation of 6,600 fish. Conococheague Creek in Adams and Franklin counties is stocked with some 15,900 fish over a 22.1-mile distance, and Laurel Hill Creek, Somerset County, gets 15,800 trout over 28.8 miles of water.

Do you prefer lakes instead of flowing water? Greene recommends the following for good early season trout action: Upper Hereford Manor Lake, Beaver County; Justus Lake, Venango County; Hunters Lake, Sullivan County; Briar Creek Lake, Columbia County; Minsi Lake, Northampton County; Muddy Run Rec Lake, Lancaster County; Canoe Lake, Blair County; and Donegal Lake, Westmoreland County.—Art Michaels.





Blue Marsh Lake STRIPERS

by Vic Attardo



ZAP! The knot connecting my leader to the fly broke. Before the breach there had been a short but memorable fight. The powerful fish had stopped the weighted streamer in mid-retrieve, and then paused a second or two while it thought about its next move.

Its decision caught me by surprise. With a quick turn toward deep water, the fish bolted across the lake as if it were being chased by a speeding train. I watched helplessly as 90 feet of fly line shot off my reel and 50 yards of backing was borne out to the last threads.

I admit it. I panicked. I took hold of the escaping line and gripped it firmly in my hand. There could be only one result to this ridiculous action: **ZAP!** The knot connecting my leader to the fly broke.

This, unfortunately, was my introduction to striped bass fishing at Blue Marsh Lake, outside Reading. Having caught stripers before in the Delaware River and on the beaches of the Jersey shore, I should have known better. The fly rod I needed had to be beefier and the reel capable of holding more backing—a lot more backing.

But I had rationalized the situation. These Blue Marsh fish were hybrid stripers, a mix between purebred bass and the panfish-sized white bass. “How powerful could they be?” I asked myself. “Couldn’t a 6-weight rod pin them down?”

Of course, I had come to the wrong conclusion.

After the first bass broke free I walked back to my truck, uncased an 8-weight rod and a reel that carried—in addition to the fly line—over 100 yards of 20-pound-test dacron backing.

Back at the lake I cast into the same “hole,” a table-sized

depression that I had located during low water. On the second cast the next striper hit.

Again there was a momentary pause by the fish, as if it were saying, “What’s going on here?” Then it, too, turned and ran for deep water. But in this fight when the striper ripped off all my fly line and went into the backing, I simply let it run. Not until the fish took its fins off the accelerator and the weight of the line helped apply the brakes, did I start pumping it back to shore.

The bass put on two or three other runs. Each successive scoot was a little shorter and a little slower than the first. It took a good five to seven minutes to land this fish, and laying it on the dry bank I measured it from the tip of its nose to the fork of its tail. The ruler claimed 23 inches, but its girth was so wide and swollen it looked like it had swallowed a pot-bellied stove. I learned later from Mike Kaufmann, Commission Area 6 Fisheries Manager, that a 23-inch Blue Marsh striper weighs around 8 pounds and has celebrated about five or six birthdays.

“So this is a hybrid striper,” I said to myself at the time. “Not bad, not bad at all.”

History

The initial stocking of hybrid stripers in Blue Marsh took place in 1984 when some 9,200 fingerlings were dumped into the lake. Since then, the 1,150-acre impoundment has been stocked four out of every five years with an average of 13,800 fingerlings measuring one to two inches in length.

In addition to the hybrid population, the Commission has also

stocked purebred bass as an experiment. According to Kaufmann, the experiment has not shown any promising signs. Recent surveys have simply failed to find the purebred fish.

But the hybrid stocking has been a huge success.

Hybrid stripers appear different from purebred bass in two respects. The black lines that run horizontally along a striper's silvery body are unbroken in a purebred but on a hybrid the lines are ragged and less distinct. In addition, hybrids are stockier fish, giving them a football-like shape.

According to Kaufmann, the average size of hybrids caught by anglers depends on the frequency and success of the stockings and the type of terminal tackle that's used. Small baits increase the number of 10-inch to 15-inch fish, but the typical average range of fish caught over the years has been between 18 and 22 inches. Fish over 26 inches long are harvested but seem somewhat rare at Blue Marsh. During some years 22-inch to 26-inch fish are common, but the lake's stripers seem to be topping out at 28 inches.

To provide a forage basis for the striper population, alewives were stocked in the lake two years before the hybrid placement. Not surprisingly, alewives are the main source of food for adult bass with an occasional panfish and crayfish thrown in for dessert. Fingerling bass dine on the lake's spotted shiners.

The action begins

Blue Marsh's striper fishing can begin as early as mid-March, and unlike the summer sport, which usually takes place at night, spring fishing is mostly a daytime pursuit.

On my first trip out last year I measured the water temperature during the third week of March at a chilly 55 degrees. A light southeast wind blew across the lake and the sky was clear. The reservoir was still drawn down to winter levels and much of the bank was exposed and barren. I cast a weighted fly into the waters of a sheltered cove and on the third cast landed a fat 22-inch fish.

Out on the water, noted Blue Marsh angler Billy Heckman was having equally good luck. Standing in the bow of his flat-bottom boat, Heckman was casting to various points along the

cove's ragged shoreline. Using a white bucktail jig with a mylar body he fanned the points and bars while floating about 50 feet out from the waterline.

That afternoon the stripers were highly active and both of us were getting frequent hookups. At times we enjoyed the daily double—Billy catching bass from his boat while I took them from shore.

Later, Heckman beached his craft and we compared notes. "They start hitting in the daytime a week or two into March and continue until early June," the young angler said.

Like all striper fishermen, Heckman loves to catch bass on poppers, but this doesn't happen early in the season. At times you may see the bass splashing the surface, but they rarely hit surface lures until the water temperature climbs into the mid-60s, and then most of the surface fishing takes place during periods of low light.

I showed Heckman that many of my fish were hitting only a few yards from the edge of the water, which indicated to both of us that the stripers were following the bait until they nearly ran out of belly room.

While we were fishing two very different rigs and lures—Billy with his jig and I with my weighted streamer—we found our techniques and the bass' reaction remarkably similar.

My use of the long rod permitted a fly to sink nearly to the bottom of the shallow cove whereupon I would then retrieve the fly with a series of short strips and pauses. Heckman would allow his lure to reach the bottom and then retrieve it with various speeds, depending on how the bass were responding. Neither of us said we were getting strikes when our lures first hit the water. It usually took at least several feet of recovering line before a strike would occur.

Between 2 and 4 p.m. that afternoon I landed at least 10 bass, lost three others and had about a half-dozen short strikes. Billy did just as well if not better in landing his fish, but he admitted the thrill of holding on to 4-pound to 8-pound bass with a fly line was worth the loss of an occasional fish that more straight-forward tackle might have conquered.

Last year, on subsequent trips from late March to mid-May, I landed an average of four fish a trip, the largest one measuring Kaufmann's magic number of 28 inches.

Weather

Fishing slowed or got hot depending on the weather. After my first visit to the lake, Berks County experienced two hard frosts and on my next visit, about a week later, a cold northwest wind blew across the impoundment. Surprisingly, the water temperature had remained constant, but the weather affected the bite and I landed only two fish. Heckman was again out in his boat but he could not buy a hit. I think the slowly sinking fly, as opposed to the faster sinking jig, was the deciding factor that day. Chalk one up for the fly rod.

About April 1 the Army Corps of Engineers, which oversees the reservoir, began refilling it and with some warm weather the water temperature climbed two degrees. Finding a shore point adjacent to deep water, I hit the jackpot with plenty of eager stripers attacking my flies on back-to-back trips. But by mid-May, the water temperature had reached the mid- to upper 60s and on two successive daytime visits I failed to get a strike. I didn't return to the lake until mid-summer when I fished during a new moon and connected with over a half-dozen bass on a white foam 2/0 popper.



Striper flies (top to bottom): Dumbbell-Eyed Minnow, Lefty's Deceiver, Heavy Metal Minnow, White Fur Leech.

Blue Marsh Lake STRIPERS

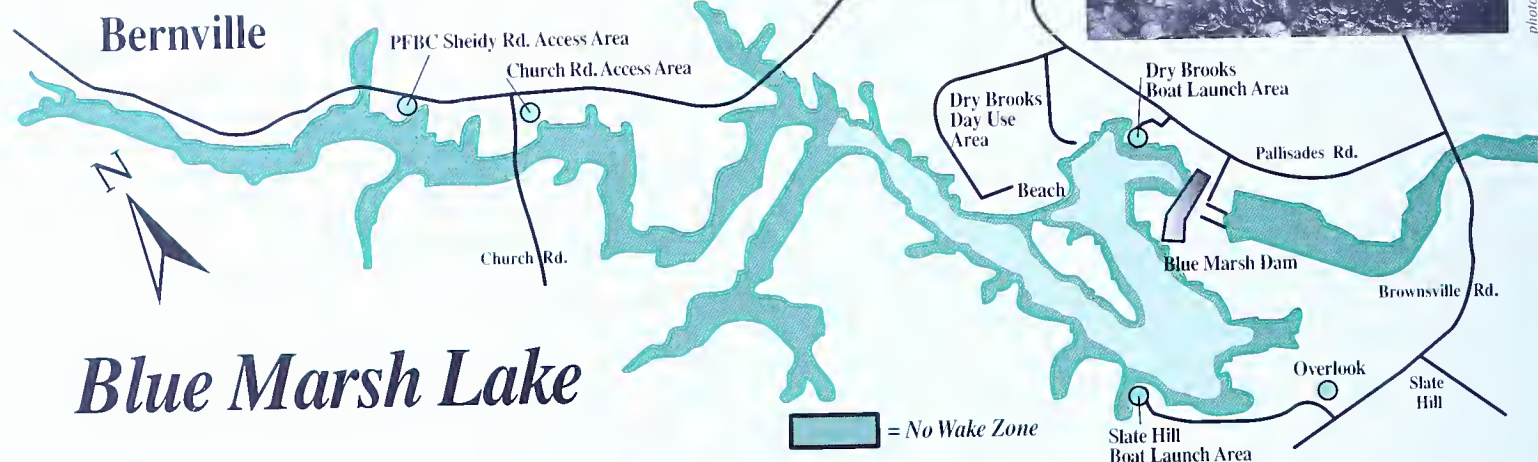


photo: Vic Attardo, map: Ted Wake

All in all I considered my year at Blue Marsh very successful with ample numbers of good-sized fish. But don't get the impression that striper fishing at the lake is easy. It's not a common pursuit, so you may have to figure out some of the fish-catching techniques for yourself.

Techniques

One mistake I have observed in many shore fishermen is their lack of stealth when approaching spring's shallow-running fish. In the early season, Blue Marsh's waters are somewhat murky, so there is no need to go to the extreme of wearing camouflage clothing when fishing the beach, as I sometimes do angling for trout in small streams. But some fishermen churn up the waters as they wade along the shore and scare off the bass that might attack close to their feet.

One day last spring I took a fishing buddy out to the lake for his first whack at Blue Marsh stripers and instructed him on how to find a good location and what to do when he got there. In short I told him not to shuffle his feet, kick up any mud or make waves on the water.

The angler—I won't reveal his name—plodded into the water before an excellent dropoff and instead of setting his feet in one spot, he proceeded to walk along the shoreline kicking up waves like a hurricane. Undoubtedly he was accustomed to walking upstream in trout waters where the fish don't normally hear you coming from behind. But his lack of stealth in these calm waters cost him. I didn't have a great day, landing only one fish over 25 inches, but he didn't get a single hit.

After comparing notes with Kaufmann I'm convinced that striped bass are a lot like good salesmen—they travel a lot. On a number of occasions I've had fish suddenly appear at one spot where for hours the water had seemed empty.

On one particular day I planted my soles about 20 feet from shore and then stayed put. I fished for over a half-hour, moving only to cast at different angles. Sometimes I threw a long cast and sometimes a short one, but my actual window of presentation was relatively small. If I had been fishing for large-mouths I would have made a few tosses and then moved on, looking for appropriate cover. But, as I suspected, the stripers eventually came to me. In the same spot where I had been fishing fruitless for some time, I was now getting repeated strikes. It was not a case of the bass suddenly becoming active. Instead I believe they had moved into my area during their normal feeding routine and for a good 30 minutes I had the hot zone.

For boat fishermen this activity doesn't mean as much be-

cause the floating fishermen can move around looking for feeding fish. But for the shore-bound angler, the routine of the bass should signal the need for patience. If the fish are feeding, a school will eventually move into range if you have selected a good location. In fishing Blue Marsh, I have mentally marked spots where the bass have hit before given certain times of the day and wind direction, and these are the spots I return to when conditions warrant.

Even though it can be a chore to cast a fly into a stiff breeze (and Blue Marsh is a windy place) I like to pick a location where the wind is blowing into the shoreline because this tends to concentrate the baitfish. If the wind is blowing too strongly I switch to a 7-foot spinning reel and a large jig to fight the breeze.

Jig selection for stripers is relatively simple. A round or teardrop-shaped jighead weighing between 1/2-ounce to 3/4-ounce is standard. White bucktail is the common adornment, but doctored jigs with silver Krystal Flash and/or silver mylar bodies are used by regulars. If need be, buy plain jigs and paint and customize the jigs yourself.

Fly selection can be just as simple. Deceivers work fine, but I prefer a fly with some weight such as one tied with lead eyes or a lead-wrapped shank. Rabbit-strip flies give a wide, attractive silhouette and I use these when there is little wind. When I'm facing a mild but constant breeze, a weighted Woolly Bugger made with metallic chenille is easier to cast.

In building flies for striped bass, conventional wisdom says to center the material on a saltwater stainless steel hook such as a Mustad 34007. But for freshwater bass I prefer a lighter hook such as the Mustad 79580 round bend or the 38941 sproat bend. I use these hooks for my bass flies because I'm not worried about the effects of saltwater on the metal, but mostly because I get a better hook penetration with a smaller point. The fine wire with the barb pinched down easily slides into the striper's jaw.

Experience has shown me that 9 out of 10 Blue Marsh stripers are hooked in the roof of the mouth and only occasionally at the hard corner of the jaw.

Fishing for hybrids at Blue Marsh is obviously a new game. No one has had that many years of pursuing the fish at this lake to be considered an expert. There are techniques and procedures, possibly more successful than the ones currently in use, that have yet to be tried. But the hybrid bass game is worth playing. You may stumble and fall for a while, but once you get the hang of it, these bass will have you admiring their fight and dreaming of your next encounter.



What do the Delaware, Lehigh and Allegheny rivers, and Bald Eagle, Oswayo, Loyalsock, Bowman, Pine, Kettle and Standing Stone creeks have in common? In addition to all being trout waters in the Commonwealth, all have an extremely common, prolific early-season mayfly hatch. That hatch usually appears near the opening of the trout season in the state. In the southern half of the state, on Codorus Creek, for example, this hatch often appears before the official opening of the season. In the northern reaches of the state, like upper Pine Creek near Galeton, and on the Oswayo Creek north of Coudersport, it appears toward the end of April. The hatch? When mid-April and late April arrive on these and other Pennsylvania streams and rivers, it's hendrickson time.

It's Hendrickson Time!

by
Charles R. Meck



From central Pennsylvania south you'll often see the hatch the second and third week in April. On Fishing Creek, near Lamar in Clinton County, I've often fished the weekend of opening day greeted by a hatch of hendricksons. That prolific stream also holds quill gordons, little blue-winged olives and blue quills. In mid-April I've often seen all three hatches appear on the same afternoon, followed by the hendrickson.

On at least 10 occasions I've seen important hendrickson hatches appear on opening day. The opening day hatch on the Lackawaxen River appeared just after a spring snow squall had ended. Water temperatures below 50 degrees dissuaded trout from rising for the stunned duns.

Just this past year Bryan Meck and I hit a spectacular hendrickson hatch on opening day on Standing Stone Creek in Huntingdon County. Again, cold water temperatures discouraged trout from taking duns on the surface. Some of the most productive opening day hatches of hendricksons have appeared on the Bald Eagle in central Pennsylvania. Several of these opening day hatches lasted several hours with trout rising continuously.

In the northern areas of the state you'll find the hatch prevalent the last week or two of April. Just last year Paul Antolosky and I spent a frustrating last weekend of April on Oswayo Creek. We fly fished the entire morning without seeing one rising trout. As the afternoon approached, we waited for a hatch to appear. We sat near the stream just below Shinglehouse and waited and waited without seeing one mayfly appear. Then Paul and I moved upstream a few hundred yards to a riffle. As we approached we saw a half-dozen trout rising to a blue quill hatch.

Paul quickly tied on a size 18 Blue Quill and began casting to some of the nearer risers. One after another Paul landed and released a mixture of brown and rainbow trout. Then a larger hatch appeared and as we glanced upstream to the next pool-riffle area, we saw another half-dozen trout taking hendrickson duns and emergers.

Paul switched to a Hendrickson dry fly and I added a weighted black emerger pattern just behind my Hendrickson dry fly pattern. I tied in a 2 1/2-foot piece of 4X tippet to the Hendrickson dry fly, secured it with an improved clinch knot,



Female red quill spinner

and tied the emerger at the end. The dry fly floated on the riffle and the weighted emerger sank a few inches beneath the surface. All six trout rising to the hatch in the heavy riffle readily took the Hendrickson Emerger pattern. The hatch lasted for a couple of hours before it ended. Before it had ended Paul and I caught more than a dozen trout on patterns matching the hatch.

Just about every trout stream worth its salt in northcentral Pennsylvania holds a decent hendrickson hatch. Streams like Kettle, First Fork of the Sinnemahoning, the Sinnemahoning, and the Allegheny River boast hendrickson hatches that often last for a week or more.

I met Jack Mickiewicz back in 1988 on the upper end of Pine Creek near Galetton in late April. Jack and I agreed to meet on the stream at 1:00 p.m. I arrived early and waited for Jack by a heavy riffle. Before Jack arrived a heavy hendrickson hatch began emerging. I tied on a Red Quill to copy the male and began casting to some early season risers. Before Jack arrived I had landed a half-dozen trout on the pattern. The hatch continued for more than two hours and Jack and I released more than two dozen trout.

Tactics

There's an especially effective technique of fly fishing that I constantly find myself using during the hendrickson hatch. Often you'll see thousands of duns emerging and few trout rising to them. At this time of year water temperatures hover near 50 degrees and trout still feed slowly if at

all. Hendricksons often emerge in riffles. I run from one riffle to another while the hatch appears, fishing over what rising trout I find. I make several casts over a rising trout, and then move on to the next, then on to another. When I've cast a pattern over all the risers in the area I move to the next riffle to look for rising trout. I'm constantly moving from one riffle to another looking for rising trout.

If the dry fly you're using during the hatch doesn't work, then add a shuck to it. Cut some black nylon stockings in small strips, pull on them so they curl up, and use them as a quick add-on to copy a dun emerging from its shuck. Attach the shuck through the point of the hook and position it just under the tail.

By just taking a couple of minutes to add this shuck, you'll get strikes.

If adding a shuck doesn't work, then tug on your dry fly so it sinks just beneath the surface. Some of the largest trout I catch during a hatch take this "submerged" dry fly.

If you encounter a spinner fall and the Red Quill Spinner doesn't seem to produce on the surface, try pulling the pattern underneath.

Emergence characteristics

Once the hendrickson has begun, you can expect it to appear daily for a week or more. On streams like Fishing Creek in Clinton County, I've seen hatches for almost two weeks. On other streams the hatch appears for four or five days and ends almost as abruptly as it begins.

Like most mayflies that appear early in the season the hendrickson emerges at the most comfortable time of day—most often early afternoon. Normally the hatch appears from 1:00 to 4:00 p.m.—but abnormal weather can change the time drastically. I remember an unusually hot mid-April day when hendricksons began appearing at 9:00 a.m. and continued to appear for more than five hours. On other warm spring days I've seen hatches appear as late as 5:00 or 6:00 p.m.

If you can hit the hatch on a cold day, the duns are often incapable of taking flight and ride the surface for some distance. Trout feed freely on these laggards on the surface. On one trip to the Delaware River, and on another to the Lackawaxen, I witnessed tremendous hatches and never

once saw one hendrickson take flight. I sat on a bank near the Lackawaxen River one late April afternoon and watched thousands and thousands of hendricksons appear on the surface. For three hours these mayflies emerged. Air temperatures in the low to mid-30s prevented any of these mayflies from flying. Yet, with a plentiful supply of food on the surface I never saw one trout rise to these mayflies. Often cold water temperatures in early spring discourage trout from feeding.

The following day I again hit the hendrickson hatch on the Lackawaxen, but this time with an afternoon temperature of 60 degrees. That afternoon most hendrickson mayflies took off readily from the surface.

With many of these early season hatches like the hendrickson, don't expect to see rising trout on every occasion. I remember a trip to the Lackawaxen River in northeastern Pennsylvania the third week in May. By the time I arrived at the stream, thousands and thousands of hendricksons dotted the surface. At that time I usually waited for rising trout, so I sat back on the stream bank and waited for rising trout. I waited and waited and waited. For more than two hours I sat back and looked for trout rising to this unbelievably heavy early spring hatch of hendricksons. In those two hours of waiting I never once saw one trout come to the surface to take a struggling hendrickson or red quill. As I recall that day, a better strategy would have been to fish an emerger or nymph pattern.

If you fish hatches like the hendrickson and other early season emergers, you'll often see thousands of insects emerging, few trout rising, and few mayflies capable of taking off from the surface. Early season hatches like the blue quill, quill gordon, and hendrickson often suffer in diminished numbers because they appear in cold weather. Craig Hudson, of Emporium, recalls many days he fished over hendrickson hatches on the Sinnemahoning near his town. Several years ago the hatch appeared in extremely cold weather and Craig relates that he never saw one dun take off from the surface of the stream.

For years after that the hatch has appeared only in very diminished numbers. Just this past year Craig says that a fishable hendrickson hatch has again appeared.

Hatches normally last a couple of hours, but overcast drizzling conditions can extend the hatch period substantially. I'll never forget one opening day hatch on Bald Eagle Creek that appeared about 10 years ago. A light drizzle fell much of the morning and continued into

hendrickson hatch. If you plan to fish a number of Keystone streams that hold the hatch, then you might want to tie a few patterns on size 16 hooks.

Effective patterns

Emerging males and females don't look alike. The former have a pinkish red underbelly and the latter, a tannish one. Because of these unlike bodies anglers use two patterns to match the hatch. For the male they use the Red Quill and for the female, the Hendrickson. Size varies for the hendrickson natural. I've seen hatches on the Allegheny River a few miles below Coudersport that could be matched adequately with a size 16 pattern. On other streams like Fishing Creek near Lock Haven, a size 14 pattern would be more appropriate.

I prefer using a parachute tie for the Hendrickson or Red Quill patterns. I strongly believe that these lower-riding patterns catch more trout. I often tie the pattern with a dark-gray deer hair post. Tie some of your dun patterns with Z-lon shucks to copy the dun emerging out of the nymphal shuck. I tie



Hendrickson parachute pattern with a trailing shuck

midmorning. Hendricksons emerged in inclement weather from 10:00 a.m. until late afternoon.

Anglers often call the spinner, or mating adult of the hendrickson, the red quill spinner because of the body color. These spinners usually come back to the stream to lay eggs in late afternoon or early evening a day or two after they have emerged as duns. Often spinners appear by the thousands and lay their yellow egg sacs just above the surface. Many of these fall spent to the surface and trout readily feed on these spent spinners. Try the Red Quill Spinner imitation when you see a spinner fall.

The size and general color of these mayflies vary considerably from stream to stream. On many streams a size 14 pattern adequately copies the natural. However, on some of the northern trout waters a size 16 more closely duplicates the size. Size might also vary for male and female. Usually the female, the hendrickson, is a bit larger than the male, the red quill. Some authorities suspect that more than seven subspecies make up the diverse

in a strip of black Z-lon about as long as the shank of the hook and extend it out over the bend of the hook. If you want you can tie a tail on top of the shuck.

The nymph and spinner, or mating adult of the hendrickson, can also be important to match. Many anglers match the nymph with a dark-brown pattern. All the nymphs I've found on Pennsylvania waters possess an almost totally black body with a small patch or two of dark brown on the back. Light brown makes up the dominant color of the head, legs and tail of the nymph. I've found a nymph with a black body, a tail and legs of dark ginger hackle, and wrapped with tan tying thread catches trout when the duns begin emerging.

Where do you go to fish this hatch? When will it appear? You'll find it on many of the Commonwealth's streams and rivers. The streams and rivers of northeastern and northcentral Pennsylvania seem to have the heaviest concentrations of hendricksons. If you plan to fish any of these waterways, look for the hatch early in the afternoon from April 15 to April 28.





The Moving Trout

by Robert L. Petri

Spring Creek, Centre County

There are many factors that make up the formula for early season trout fishing success on Pennsylvania streams. And it is altogether likely that no two fishermen will totally agree on exactly what this formula is. Some say it's the lure, fly or bait that makes the difference. It has to be the right color, the right size and so forth. Others maintain it's not what you fish, but how you fish it that matters. Still others preach the importance of finding undisturbed fish by hiking in away from the bridges and other popular access points on some of our more crowded early season waterways. Almost everybody has a particular slant on what matters most. These notions and theories are, and always will be, the subject of many late-night discussions wherever anglers come together to compare notes and talk about the sport.

Several decades of observation on the water have led me to conclude that everybody's theory is a little bit right, and perhaps a little bit incomplete. I believe that



I believe that nothing contributes more consistently to angling success than having a better understanding of the trout itself and how it reacts to changing conditions in its home environment, the stream.

nothing contributes more consistently to angling success than having a better understanding of the trout itself and how it reacts to changing conditions in its home environment, the stream. Understanding these things gives you a much better idea of where the trout are, which is step one on the road to success. After all, it's difficult to get a fair assessment of what is the best bait, lure or fly if you are not putting it where the trout lives. In the same way that a nod is as good as a wink to a blind horse, a wing nut is as effective an offering as a nightcrawler or a size 10 Woolly Bugger when it is fished in places where there are no trout.

The most important thing to remember is that trout in a stream are not stationary. They move around constantly in reaction to a multitude of factors, such as stream level and temperature, sunlight and shadow and the availability of food. Every stream in the Commonwealth undergoes changes in all these factors every season. By learning what these changes mean to the trout, and how they affect their behavior, you can become a better angler.

Water temperature

No single factor seems to have more influence on early season trout than water temperature. Have you ever noticed that early in the season, the best fishing most often occurs during mid-day? This is much more than coincidence. Trout are cold-blooded creatures, and their metabolism is directly affected by the temperatures of the surroundings. Early in the season, most of our streams are quite cold, usually in the low to mid-40s. In fact, in April, it is not at all unusual to find some of our small mountain streams holding in the upper 30s.

This is especially true early in the day before the sun has a chance to warm the water. Trout in water under 45 degrees have a tendency to be lethargic, and are usually not willing to chase a lure or fly very far. Under these conditions, you should look for trout where they can rest and conserve energy. This usually means the deeper pockets and pools where the current is weakest. By working these areas slowly with your bait or lure, you give the sluggish trout the maximum amount of time to look at your offering, and this means more hook-ups. In general, the closer you are fishing to the bottom, the better. Use the appropriate amount of weight to get your bait or fly down into the "business zone."

When the sun rises high enough to put some warmth into the water, the situation changes. I can't count the number of early season encounters I've had with anglers who say, "Nothing happened all morning, and then about noon, it was like somebody hit a switch and everybody started catching fish." The "switch" these fishermen refer to is the effect of rising water temperatures on trout. As the water warms, the trout become more active and willing to chase a fly, spinner or a drifting minnow or crawler. This is one reason why a stream that appears to be fishless in the morning often comes alive with feeding trout early in the afternoon.

As the water temperature rises and the fish become more active, change your tactics to take best advantage of the situation. Now

is the time to put a little more action into your lure or fly, and perhaps a little more speed into your retrieve. Do your best to make your offering look alive. You are now working over fish that are a good deal more interested in a meal than they were a few hours ago when the chill of an April morning was still on the water.

Early season changes in water temperatures often cause trout to change their physical location in the stream to take in the most warmth. As the sun climbs higher and falls directly on more of the stream, trout often gravitate to areas of shallower water, which warm more rapidly than the deeper runs and pools. As long as there is some cover nearby to give the trout a sense of security, sections of flat water that are fully exposed to the mid-day sun are excellent areas to prospect under these conditions.

Water level

The level of the stream also plays a very important role in determining where the trout are holding. Regardless of the season, low and clear flows mean that the majority of the trout can be found close to cover, or hugging the bottom in the deeper pools. This behavior is the natural response of trout to the increased likelihood that they will be spotted by a heron or other predator under such conditions. Wild trout have this instinct from the time they are first able to swim under their own power, and hatchery fish learn very quickly to protect themselves this way.

Low flows combined with cold water can mean some of the toughest angling conditions of the season. The trout are not only less active in the chilly water, but they are also much more nervous than during periods of more normal stream levels. These are the times when taking a little more care with your approach to the water can pay big dividends. Stay out of sight as much as possible. Smaller lures and baits can add to your success under these conditions because they cause minimal disruption on entering the stream and are less likely to spook the fish. Consider getting away from the more crowded sections of the stream and staking out a pool or run of your own where the fish have been less disturbed. Even though these places may be away from the main stocking points, and hence usually hold fewer fish, those trout that are there will likely be more receptive to your efforts.

In a stream that is high and somewhat off color, the rules change completely once again. High water has a number of immediate effects on trout behavior that are important to the angler. First, higher flows are likely to mean lower water clarity. Trout sense this, and tend to lose a little bit of their inherent caution. They move away from their positions tight along the banks and behind rocks and boulders and travel more freely around in the stream.

The protection or shielding provided by discolored water is not the only factor in this movement. High flows usually carry lots of drifting food items dislodged from the banks. Trout realize this, and they position themselves to take advantage of the opportunity to pick up a quick meal. If water temperatures in your chosen stream are warm enough to get the fish moving, high and somewhat discolored water can set the stage for some

of the best fishing of the season. Now is the time to use larger and more colorful flies and lures to catch the trout's attention.

High water can energize the trout and make the fishing easier, but water that is too high can cause problems for you and the trout. This is true even in our small mountain streams that do not easily discolor regardless of water levels. In the same way that you would seek shelter in a windstorm, a trout seeks relief from the increased current velocity that comes with very high water. At these times, they return to holding lies that are as much out of the main flow as possible. Look for them to be holding tight to the bank and in the natural eddies and backwashes that can be found in almost any stream.

In high water, trout often leave the more narrow portions of the stream where the banks constrict the flow and intensify its velocity, opting instead for the wider stream sections where the power of the current is somewhat dissipated. These are the places where they need to expend the minimum amount of energy to hold in the flow. It has been my experience that newly stocked trout often move to these areas of slack water as soon as the stream starts to rise considerably. This may be because such places resemble the relatively gentle conditions in their recent hatchery homes.

Current velocity

Current velocity is not the only factor that prompts trout to move during periods of high water. Periods of high flow often bring drastically increased sediment loads to many of our medium and larger trout streams. Just as you would avoid remaining in the middle of a dust storm for any length of time, the trout do their best to avoid the suspended solids and other debris that discolor many of our streams during high water periods. If they are dense enough, these solids hinder the trout's ability to filter incoming water through the gills. This makes for uncomfortable fish that are likely to seek more hospitable locations.

Under these dirty water conditions, trout move in search of places where the sediment load is lessened, and they can breathe easier, so to speak. Areas close to the banks and backwaters and eddies offer refuge from some of the sediment, and you should concentrate your efforts with this in mind.

Mouths of small tribs

The mouths of small tributaries can be excellent places to look for early season trout for several reasons. If the trib is short in length and has little time to be affected by cold air temperatures before it surrenders itself to the main flow, it may actually offer warmer water than the main stream. Remember that spring water the world over leaves the ground at the average annual air temperature for the area. Here in Pennsylvania, this usually means somewhere between 50 and 54 degrees. If the temperature of the stream you are fishing is in the low 40s, this difference of up to 10 degrees often attracts fish to hold in the warmer outflow of the tributary. Additionally, these smaller tribs clear of sediment much quicker than the main stem of the stream. Where they meet the main stream, they usually provide a brief zone of clear water that is attractive to trout stressed by dirty water.

The early season is not the only time when knowing how trout move in response to changing conditions can pay off. The small trib that may offer warmer or higher-clarity water in April can switch roles and provide an oasis of cold water that attracts trout during the hot months, when water temperatures in the main stream are edging into the low 70s and are beginning to exceed the upper

thermal comfort level for trout. A good friend who spends a lot of time chasing trout in the main stem of the Clarion River always concentrates on the mouths of the small tributaries after the first of June. He catches good numbers of trout that are better measured in pounds than inches. As the river temperature continues to climb as spring gives way to full summer, the cooler outflows at the tributary mouths draw trout like a magnet.

Hatches, baits, lures

The major insect emergences that occur on most of our better streams from late April well into June cause trout to move into locations in the stream where they can take best advantage of this transitional source of forage. You might be surprised to know that it is not just the fly angler who can benefit from such situations. Unless the hatch is very heavy and the trout are absolutely keyed in on it, many of these fish can be taken on small lures and carefully placed baits. The passing parade of insects has put the fish in the mood to feed in general, and often they will not let a flashing spinner or a drifting crawler get by them, despite the fact that they are primarily feeding on the insect of the day. If you see a trout rise to a mayfly or caddis, try putting a small spinner a few feet upstream from the ring of the rise, and then retrieve it through the area where you last saw the fish. More often than not, you will be rewarded with a strike.

During insect hatches, trout gravitate to locations in the stream where they can take in the most food and expend the least energy. A slot between two boulders that funnels the flow and flies will almost always have a fish in residence during the hatch, as do many of the bankside eddies where the water circles endlessly. Whether you fish bait, flies or lures, these are the places where you can find the most success when a good hatch puts the fish on the feed.

So debate the merits of silver versus brass spinners and redworms versus mealworms all you want. The individual preferences of each angler are a big part of what keeps our sport lively and interesting. Just don't forget that knowing what your quarry prefers in living conditions can be the most powerful angling knowledge of all. After all, you are trying to fool him on his court, in his house. Knowing where he is likely to be in the water under a host of varying situations not only gives you an increased respect for his adaptability and savvy, but it makes you a more successful angler.



Scouting

Small tributaries can draw considerable numbers of trout to their mouths both in the early season as a way to avoid very cold water and silt, and in summer as a source of cooler water to provide comfort and refuge to heat-stressed fish. But not all tributaries are created equal. Here is a good way to determine which of the small tribs to your favorite stream attracts fish.

Take a stroll along the banks of your favorite stream, preferably in the dead of winter, when it is frozen over. Note which tribs create short sections of open water in the main stream below their mouths. These windows of open water are good indicators of the power of the tributary to affect water temperatures in the main stream all year long, and will be the best places to look for trout seeking relief from the cold water of early spring and the warm water of summer.—RLP.

Pennsylvania's Best Carp Fishing

Some waterways in Pennsylvania are loaded with nice-sized carp. For instance, Commission Area 3 Fisheries Manager Bruce Hollender says that several northcentral Pennsylvania waterways have abundant carp populations with plenty of 10-pound to 15-pound fish, and the West Branch of the Susquehanna has plenty of 20-pounders at the tributary mouths. Brutes with those measurements provide terrific sport, especially on light tackle. Other Commission area fisheries managers have conducted similar surveys. Here are their recommendations on where to enjoy Pennsylvania's best carp fishing.



<i>Waterway</i>	<i>County</i>
Pymatuning Reservoir	Crawford County
Lake Arthur	Butler County
Beaver River	Beaver & Lawrence County
Allegheny River	All counties
Conneaut Lake	Crawford County
Glendale Lake	Cambria County
Sayers Reservoir	Center County
W. Br. Susquehanna River	Lycoming, Northumberland counties
N. Br. Susquehanna River	All counties
Hammond Lake	Tioga County
Delaware River	All counties
Lehigh River	Northampton, Lehigh counties
Lake Nockamixon	Bucks County
Blue Marsh Lake	Berks County
Lake Ontelaunee	Berks County
Chester-Octoraro Reservoir	Chester, Lancaster counties
Green Lane Reservoir	Montgomery County

Susquehanna River	All counties
Juniata River	All counties
Bridgeport Dam	Westmoreland County
Canonsburg Dam	Washington County
Dutch Fork Lake	Washington County
Duke Lake	Greene County
Lake Somerset	Somerset County
Loyalhanna Reservoir	Westmoreland County
Monongahela River	All counties
North Park Lake	Allegheny County
Ohio River	Allegheny, Beaver counties
Raccoon Lake	Beaver County
Youghiogheny River Lake	Somerset, Fayette counties



On the Water

with Robert L. Petri

Tucked-Away Places

I don't know about you, but I am almost constantly at war with the little voice inside me that asks why I am mowing the lawn, clearing my desk or washing the car when I could be fishing. Responsibility usually prevails and I get my work done first, but sometimes it is a very near thing.

There is, however, one particular temptation that almost always wins, no matter how strongly I try to resist. Tell me you know a place where nobody else has fished recently, where the trout or bass are big and easy from never being bothered by anglers, and you'll have me. The lawn doesn't stand a chance. The lure of unexplored and tucked-away places does something to me. Before I know it, I'm in my car and on the way.

Out of the blue, my old childhood buddy Jim called me one hot summer day a few years back. I remember him as kind of a somber sort, whose only joy seemed to be when I would fall in the creek or tumble down a bank while we were fishing together. He couldn't get enough of this sort of thing, and he would laugh almost to the point of tears.

Now, after 15 years of going our separate ways, Jim had a proposition for me. He said that along the abandoned tracks that run the valley of French Creek in southern Erie County, there was an old steamer pond that just swarmed with big large-mouths, and only he knew about it. Was I interested? I said I'd meet him in an hour and cancelled the rest of my day.

We met where the road crossed the tracks at the nearest point to the pond. "It's only about a half-mile carry," he said. We threw the rods and tackle boxes in the canoe and started lugging it down the track. An hour later we were still lugging. It was hot, and old railroad ties don't make for comfortable walking. "Just a little farther," Jim assured me. What price paradise, I thought to myself.

Finally, dead ahead on the left, the small pond shimmered in the sunlight. We set the canoe down and walked over to have a look. As I peered down at the murky green water, the loose gravel went out from under my feet and I slid down the bank and into the pond up to my haunches. Jim stood above me and roared in glee. Just like old times...



We pulled the canoe down the bank and put in. There was only about an acre of water to be covered, but it did look bassy. Stumps and brushpiles and thick weed beds were everywhere.

However, as we all know, looks aren't everything. We flailed away for almost three hours. Our tally was four 9-inch large-mouths, and the sight of a mighty shadow that simply inhaled Jim's lure found the nearest weeds and broke off. So there was at least one big fish here. By my standards, this qualifies every other old steamer pond in the Commonwealth as worthy of investigation. But then again, my thinking tends to run that way. We carried back out and took off. Jim went in to work second shift and I went home and counted my new collection of mosquito bites.

A few years later I was minding my own business when the phone rang. This time it was one of my old college buddies who shared my affinity for tucked-away places. He said he had been grouse hunting in a remote part of Warren County the previous fall and had come upon a tiny stream where he could see dozens of wild brookies (it's never just one or two) lying out on their spawning redds. Some, he said, were close to a foot long. Now it was May. Tomorrow was to be warm and sunny. Was I interested? Oh, by the way, he added, we would have to cross a swamp and hike about two miles to get to the stream. It was likely that nobody had fished it since Truman was in office. I told him to knock it off, and quit playing on my weaknesses. Where did he want to meet?

We met in Warren and I followed him far back a National Forest road to a point where a gate barred the way. We slogged through the swamp, crossed a couple of ridges and descended into the valley of the little stream. Red-faced and puffing like steam engines, we sat to rest and rig up.

The little brook was everything he had promised and more. There were no beer cans along the banks and the only path to be seen bore the hoof marks of countless deer. Almost every pocket and break in the flow held a trout. Even though the foot-long brookies of the previous autumn had disappeared, we caught and released more than a dozen trout each in the 8-inch to 10-inch range—a fine day anywhere over Pennsylvania brookies. Maybe the last people to fish here really did refer to the First Couple as Harry and Bess. It would be nice to think so.

The sun was settling into the top of the ridge line when we gave up and started back out. It was nearly dark when we got back to the cars. We barely noticed. We were giddy with our little secret and with the joy of conquest. Someday I will return, but it will likely not be until the intervening years have allowed at least a part of the mystery of the place to return.

Our tucked-away places are like the packages that lay beneath the tree at Christmas time. You never know for sure what you will find. Some will contain lumps of coal like the steamer pond. Others will hold wonderful surprises like the little brookie stream. All are worthwhile. The joy is in the unwrapping. Now, if you'll excuse me, I think I hear the phone.

ANGLER

photo-Mark Nale

The March Brown Dun

by Walt Young

Most experienced fly-fishermen in Pennsylvania should be familiar with the March Brown. This popular pattern imitates one of the state's best-known and important hatches. One of our larger mayflies, march browns begin emerging on many trout streams all over Pennsylvania around the middle of May.

Unlike a lot of the other renowned hatches that tend to appear in great numbers at a particular time of day, march browns generally hatch sporadically throughout the day. The first duns usually start coming off in late morning, sometime around 10 or 11 a.m. Some days there can be a flurry of hatching activity during the afternoon or early evening.

Just because march browns rarely are found on the water in the concentrations typical of other hatches doesn't mean the fish aren't keenly aware of their presence. Their size readily attracts the fish's attention. As a further temptation, freshly hatched duns often ride the current a considerable distance before taking flight, making them easy prey for hungry, spring-time trout.

During march brown time, it is possible to have steady dry-fly action nearly all day long merely by probing likely fish-holding spots with a March Brown imitation. Another tactic is to keep an eye on the water for random rises as fish pick off the occasional march brown dun as it drifts by. Once a feeding fish betrays its presence, it will usually take a properly placed fly without hesitation.

The name "March Brown" originated in the British Isles during the 19th century as the common name for the mayfly *Rhithrogena haarupi*, which, as the name implies, hatched in March and is mostly brown. In North America, the insect we refer to as a march brown is *Stenonema vicarium*. Apparently early American anglers thought this mayfly and the patterns used to imitate it similar enough to

the march brown described in British fishing books to warrant the same name. That's why march browns on this side of the Atlantic make their appearance in May.

There may be more variations of the March Brown than any other well-known fly pattern. One older pattern dictionary in my collection lists over 50 different dressings under the heading of March Brown. Probably the most commonly accepted March Brown pattern today is the one described in Art Flick's book, *Streamside Guide to Naturals and Their Imitations*. This insightful little book, first published in 1947, served as the bible on trout stream insects and the flies to imitate them for generations of anglers.

In *Streamside Guide*, Flick also lists Preston Jennings' American March Brown pattern. Preston Jennings' classic 1935 work, *A Book of Trout Flies*, was one of the ground-breaking texts in American angling entomology and fly-tying. Flick, a protégé of Jennings, points out that his version of the March Brown is slightly different but certainly a copy of Jennings' original pattern.



Dressing: March Brown Dun

Hook: Standard dry fly, sizes 8 to 12.

Thread: Tan or orange.

Wing: Wood duck flank feather or mallard flank dyed the appropriate shade.

Tail: Brown hackle fibers.

Body: Tan dubbing.

Hackle: Brown and grizzly.

The tendency for fly-tiers to modify an accepted fly pattern is not always an arbitrary effort. Certain species of insects can vary significantly in color from one area to the next. Having the ability to make necessary modifications is one of the great benefits of fly-tying.

In some areas, march browns are often described as having a buff or yellowish cast. This apparently is the case in the Catskill region of New York, where Flick did his research, because his dressing calls for a body of "light fawn-colored fur from red fox." The march browns that I've encountered here in Pennsylvania are decidedly darker, more toward tan or gray. I have always felt more confident tying my March Brown imitations with a body closer to that shade.

Jennings and Flick both specify orange tying thread, which, of course, results in an orange head on the finished fly. I have always thought this to be more traditional than imitative. Many of the old English March Brown patterns specify orange tying thread, possibly because the flies over there may have an orangish head. It's a minor point, and one the fish probably don't notice, but I prefer to use tan for a closer imitation.

Finally, don't limit your use of the March Brown only to the few weeks each spring when the naturals are on the water. Having it in a range of sizes, I have found the March Brown to be a great all-purpose fly throughout the season. Think of it as a medium-colored Adams.



1. Tie in the tip of a wood duck flank feather for the wing. The tips of the feather should point forward over the eye of the hook. The length of the wing should be equal to the length of the hook shank. The tie-in point should be approximately one-quarter of the length of the hook shank behind the hook eye.



2. Pull the wing upright and jam several tight turns of thread against the front side of the wing to secure it in place. If desired, the wing can be divided by separating the wing into two parts by criss-crossing the thread through the wing two or three times.



3. Neatly trim the excess butt end of the wing feather and advance the tying thread to the bend of the hook. Tie in a bunch of stiff hackle fibers for the tail. The tail length should also be the same length as the hook shank.



4. Apply dubbing to the tying thread and wrap forward to form a neat, tight body, ending just behind the wing.



5. Tie in one grizzly and one brown dry-fly hackle behind the wing.



6. Wind several turns of each hackle on both sides of the wing, tie them off, and carefully snip off the excess hackle tips. Take care to leave room to form a head.

ANGLER



Fishing for Stocked Trout

in Southeast Pennsylvania by Mike Bleech

By the time my wife, Jeri, and I found the stretch of public access, it was mid-morning, and the July sun was beating down mercilessly. We started fishing at the lower end—the plan was to fish terrestrials upstream. The water looked lifeless. After fishing a hundred yards I checked the water temperature—73 degrees. Little wonder we could not interest trout in our grasshoppers or ants.

Water temperature is an important factor in southeast Pennsylvania trout fishing. Several stocked streams and lakes simply get too warm to support trout during summer, while in most others the only places to find active trout are the coolest parts of the streams. The stretch Jeri and I were fishing was mostly open to sunlight, except at the very head of the public access where it emerged from wooded hills. We looked there for cooler water, and found it.

The difference was apparent when we peered into the water from a bridge. Dozens of trout, including several palomins, held in the long pool. Every few minutes one would boil near the surface.

"I didn't expect to see so many trout," said my wife and favorite fishing buddy. "Where are all the fishermen?"

We climbed down the bank and crept to the edge of the creek, keeping a low profile. I dropped my thermometer into the water. It read 68 degrees. In just a few hundred yards the water we checked previously had warmed 5 degrees.

I suspect the oxygen content was also much better upstream, where the water entered from a series of small riffles that extended as far into the posted land as we could see. The public access stretch was mostly flat water exposed to direct sunlight most of the day.

A trout rose short to my deer hair grasshopper on the first drift.



When a half-dozen more drifts produced no results I switched to a tiny black ant. That yielded the same results—a short rise and then nothing. We expected better from that herd of trout.

My inability to get results was caused by my failure to observe what was going on around us—a caddis hatch. I should also have noticed that the trout were not taking the insects off the top, or even in the film, but instead, well below the surface. So I wasted still more time drifting dry flies. Finally, after most of the natural activity was finished, I drifted a two-fly set of small nymphs and saved what remained of my fishing ego.

A native of the sparsely populated Allegheny Highlands, I find the fishery in our southeast counties enigmatic. Enthusiastic anglers crowd the waters during the first weeks of the season in April, and after stocking truck visits. It is hard to imagine that any trout could survive the barrage of baits, hardware and flies. They do, though. But during summer I see more anglers on remote highlands headwaters than on the much more civilized southeast creeks.

Stocking is designed for intensive early season fishing, particularly in the southeast where a lot of the stocked water is not suitable trout habitat during mid-summer. However, there is a surprising amount of good trout fishing in this area any time you get a hankering to fish, if you understand the nature of this water.

pH factor

“Generally for people in Pennsylvania who are avid trout fishermen and picture a crystal-clear freestone, this is not what we are dealing with for the most part here, except in the Schuylkill County area and some of the streams that come off of Blue Mountain, the last major ridge before you get out into the piedmont,” says Mike Kaufmann, Commission Area 6 Fisheries Manager. “Many streams in southeastern Pennsylvania are

more in agricultural valleys, or streams that flow through low-elevation rolling hills, so you do have some of that freestone appearance temporarily before they get out into the valley. And then once they get out into the valley they end up being a much more lower gradient, meaning you have longer pools and much shorter riffles.”

Freestone streams do not originate from limestone. They have much lower pH, generally lower than pH 7.0, which means they are acidic. Farmland streams take on more of the chemical characteristics of limestone streams, about pH 7.5. They are alkaline (neutral is pH 7.0). Low pH is a major reason that anglers are more likely to encounter brook trout in other parts of the state.

“If the pH is less than 6.5 we don’t stock rainbow trout in the stream,” Kaufmann says. “If it’s less than 6.0 we usually don’t stock the stream at all. I don’t have one of those situations. That’s usually an acid precipitation situation.”

Another reason for stocking rainbow trout in the southeast is because they are not as vulnerable to fishing pressure as brook trout. This is a reason there is a surprising number of trout remaining in these streams during summer.

Higher pH generally means more fertility. Classic limestone streams harbor abundant insect life. Correspondingly, they support more and larger trout than freestone streams. However, in southeastern streams fertility is offset by water temperature.

There are a few genuine limestone streams in Berks, Lancaster, Chester and Montgomery counties. Valley Creek, which flows through Valley Forge National Park, is the most famous. It has a wild brown trout population to compare with the best limestone streams. As a wild trout stream it is not stocked, but it is so unusual in this part of the state that it warrants mention here.

“There are fair numbers of fish that run from 16 inches up to 20 inches,” Kaufmann says.

Valley Creek is polluted with PCBs, so no harvest is allowed. Fishing is allowed with baits or lures. Access is very good through the National Park. Elsewhere, many landowners allow anglers who ask for permission to fish, because anglers have behaved well.

Temperature factor

"You can catch fish through the summer in some of the streams," Kaufmann says. "Other streams, you probably wouldn't find fish in there much after the beginning of July, and it's questionable whether they would even be willing to bite through late June. There are some other streams where the water can get too warm for trout by the end of May. Those streams are stocked very early, and the stocking ends very early.

"The majority of streams cannot support trout in August, at least two-thirds, and maybe three-quarters, of them."

Based on research recently completed by Penn State, the lethal temperature for trout is 80 to 82 degrees. This is much warmer than other published figures I have seen. In fact, the lethal temperature for just our stocked trout varies from hatchery to hatchery, and from species to species.

Long before water temperature becomes lethal, trout become inactive. When the water temperature rises above 72 to 75 degrees, trout stop feeding. After prolonged periods they become emaciated. Fishing is futile. Often trout migrate to cooler areas.

The trick to finding trout in southeastern streams during hot summer weather is locating the coolest water. A thermometer is a vital tool. Avoid long stretches of water that are exposed to a lot of sunlight. Look for the shadiest water. Fish below cool tributaries, or even in little brooks.

Generally, the headwaters are cooler than downstream waters. The Little Schuylkill, for example, gets too warm in the Delayed-Harvest area, except below cool tributaries where trout congregate. Farther upstream, where stocking is done by a cooperative nursery, this creek is cool enough for good trout fishing through summer.

Fish very early in the morning. Water temperature can vary several degrees through the course of a day. Trout might feed only during the morning before the temperature begins to rise.

Siltation is a serious problem in many southeast trout streams. Farms, storm sewers and road grading all contribute. Some stocked streams are normally much dirtier than stocked streams in the rest of the state. But trout stocked there are expected to be harvested quickly. Because there are so many anglers for relatively few streams, these silty streams must be used.

"There is a considerable number of streams that we stock that definitely have a silt and sediment problem," Kaufmann says.

Anglers in the southeast gravitate to those streams that are stocked with the most trout. The number of trout that are stocked is not a very good indication of comparative fishing quality, though. Trout are stocked at the same rate in all of the streams, on a per-acre basis. One way to beat the fishing pressure is by fishing streams that are not connected with the big numbers. Another way to get away from crowds of anglers is to get away from the roads.

"Generally speaking, in our experience doing creel surveys, on almost any stream in southeast Pennsylvania if you are willing to walk a quarter-mile into an area that isn't accessible by roadways, you can get away from fishing pressure pretty quickly because most of the fishermen aren't willing to walk," Kaufmann says.

Anglers who fish the stocked streams regularly know the stocking points, which are generally the easiest places to carry

in buckets of trout. You can avoid the heaviest fishing pressure by fishing between the stocking points.

"Another thing I tell anglers in southeast Pennsylvania is that they can do well and avoid pressure by instead of fishing the first thing the opening day of trout season, go there at 10 o'clock in the morning, or 11 o'clock. Most of the people are leaving the stream at that time," Kaufmann says.

Fishing pressure is most heavy during the first couple of weeks of the season, and immediately following stocking truck visits. But after in-season stocking most fishing pressure disappears in a couple of days.

Streams that are stocked with fingerling trout do not show up on the stocking lists. The Delayed-Harvest area on Tulpehocken Creek at the tailwaters of Blue Marsh Dam is a well-known fishery. Fingerlings were previously stocked at the tailwaters of Lake Marburg, in Codorus Creek, but that was curtailed after a Class A wild brown trout population was discovered.

"We've had pretty good luck, I guess you could say, with these fingerling programs," Kaufmann says.

Some streams to watch in the future are Cacoosing Creek, a part of Spring Creek that is not stocked with catchable trout, and Sacony Creek, all in Berks County. These streams are being experimentally stocked with fingerling trout.

ANGLER

Stocked Trout Lakes

Lake Marburg, in York County, Antietam Lake, in Berks County, Upper Rexmont Dam, in Lebanon County, and Lakeside Quarry, in Lebanon County all support trout year-round. The first three are stocked with catchable trout, the latter with fingerlings. Lakeside Quarry's steep sides keep it cool, even though it is only about 20 feet deep. Cool, shaded tributaries feed Antietam Lake. Tiny Upper Rexmont Dam has good oxygen content to its bottom, as does Lake Marburg, which is more than 90 feet deep.

Lake Marburg had a fingerling trout stocking program for several years, but after walleyes were introduced the fingerling program showed poor returns and it was discontinued in the early 1980s. Some surplus hatchery trout were stocked after that, resulting in a few large trout taken by anglers who were pursuing other species.

"Last year with the new program where we stock larger lakes that are two-story lakes, we put Marburg back on right away. We figured that the adult rainbows would have a better chance of eluding the walleyes. They have, in fact, and they were stocked the first weekend after the opening day of trout season.

"They were stocked not only with the idea of providing an instantaneous fishery. They were stocked with the idea that they would escape the walleyes and get much bigger, and provide fishing later on. They have done that."

Rainbow trout stocked soon after the trout season opening day had grown from 10 to 11 inches to 13 1/2 to 15 1/2 inches by fall. They have fared well on the forage base of spottail shiners and spotfin shiners.

Methods used to catch trout at Lake Marburg are unusual in this part of the state. Downrigging, for example, is seldom seen elsewhere. Some anglers merely lower their baits, worms in particular, into the deeper water near the dam.

Several other lakes in the southeast corner are stocked with trout, but they do not provide a year-round fishery.—MB.

Bass Season/Harvest, Targeting Proposals *Withdrawn*

Expressing concern that proposed changes might unduly restrict angling opportunities, the Fish and Boat Commission has shelved rulemaking aimed at restructuring season and harvest regulations for bass on inland waters. Regulatory language that specified evidence of fishing in the closed season was also withdrawn at a special Commission meeting held February 12 in Harrisburg. The vote to rework the proposed changes passed by a 7-3 count and encompassed several points:

1. Except for the proposed changes on Lake Erie and Presque Isle Bay, further consideration of the proposed regulations on restructuring bass seasons and harvest and fishing during the closed season will be deferred, and the Commission will not proceed with publication of a notice of proposed rulemaking containing proposed changes to these regulations for 1997.

2. The Commission will proceed with publication of notice of proposed rulemaking and seek public comment on the proposed changes for seasons and harvest on Lake Erie and Presque Isle Bay. If approved on a final vote, the rulemaking would take effect in 1997.

3. Except for the possible changes applicable to Lake Erie and Presque Isle Bay, the current bass season and harvest regulations will remain in effect throughout 1997. Any possible future changes will be considered for an effective date no earlier than 1998.

4. Commission staff will prepare a report outlining other alternatives that should be considered in this area ("no harvest" seasons, tackle restrictions, etc.) and provide it to the Fisheries Committee for consideration no later than September 1996.

5. The Commission will continue to consider proposed changes to its regulations on fishing tournaments, which are currently out for public comment. In light of the deferral of further consideration of the other changes, the public hearings scheduled for March were limited to taking comments on the tournament regulations.

The propositions reflected concern among staff and anglers that current harvest regulations during winter and spring may influence the size structure and, hence, quality of bass populations. After much discussion among staff and representatives of various angling groups, it appeared that conservative harvest regulations that would benefit the size and structure of bass populations in many instances would have broad public support.

Accordingly, the Commission proposed regulatory alternatives to all current bass regulations/seasons. These proposed changes were:

Statewide Regulations. A. 12-inch minimum size and six bass daily creel limit during the period from first the Saturday

after June 11 through midnight October 31. B. 16-inch minimum size limit and two bass daily creel limit during the period from November 1 through midnight the last day in February. C. Closed season March 1 through midnight Friday preceding the first Saturday after June 11.

Big Bass Regulations. A. 15-inch minimum size and four bass daily creel limit during the period from the first Saturday after June 11 through midnight October 31. B. 16-inch minimum size limit and two bass daily creel limit during the period from November 1 through midnight the last day in February. C. Closed season March 1 through midnight Friday preceding the first Saturday after June 11.

Conservation Lake Regulations. A. 15-inch minimum size and two bass daily creel limit during the period from the first Saturday after June 11 through midnight October 31. B. 16-inch minimum size limit and two bass daily creel limit during the period from November 1 through midnight the last day in February. C. Closed season March 1 through midnight Friday preceding the first Saturday after June 11.

Lake Erie and Presque Isle Bay. A. 15-inch minimum size and four bass daily creel limit during the period from the first Saturday after June 11 through midnight Friday preceding the first Saturday after April 11. B. 20-inch minimum size and one bass daily creel limit from the first Saturday after April 11 through midnight Friday preceding the first Saturday after June 11. C. Bass tournaments prohibited during the trophy bass season (12:01 a.m. on the first Saturday after April 11 until 12:01 a.m. on the first Saturday after June 11) on Lake Erie and Presque Isle Bay.

The proposed restructuring of bass season and harvest regulations also renewed questions about the interpretation of the closed season for bass (and other fish). The proposed regulation provided:

Fishing during closed seasons. A. It is unlawful to take, catch, kill or possess (while in the act of fishing) or to target or intentionally fish for any species of fish for which the season is closed, even if the fish is to be released. In prosecutions for targeting or intentionally fishing for a particular species of fish during its closed season, evidence of the violation may include, but need not be limited to, the number of fish caught, the water area fished, the equipment, lures or bait used, other species of fish present in the waters fished, and the method of fishing. B. Any fish inadvertently or accidentally caught during the closed season for that species must be immediately returned unharmed to the waters from which it was taken.

In withdrawing all but the Lake Erie proposals at the February 12 session, the Commissioners noted that the agency mission is "to provide fishing and boating opportunities through the protection and management of aquatic resources." The majority vote reflected a belief that proceeding with the proposed regulations may unduly restrict fishing opportunities beyond what is immediately required to protect the resource or provide for changes in the size structure of the bass population.

Furthermore, it was decided, a number of regulatory alternatives should be given additional consideration before the Commission formally seeks public comment and holds public hearings on changes to the structure of bass season and harvest regulations.—*Dan Tredinnick.*



Pennsylvania Fish & Boat Commission

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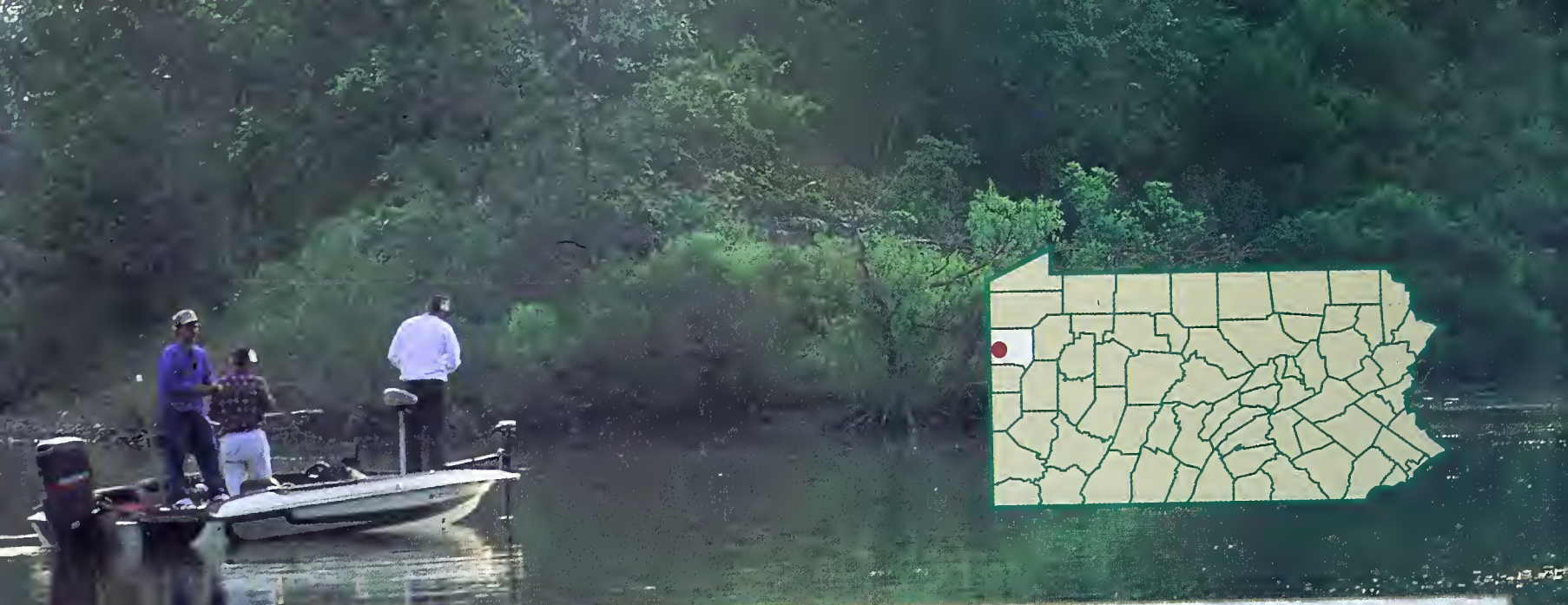
by
Darl Black

“Look at the size of that crappie!” I said as Frank Parise swung the fish aboard. “That is one big crappie for Pennsylvania.”

We both admired the fish before Frank dropped it into the livewell with about a dozen others almost as large.

“There’s not a single crappie under 12 inches in the well,” I said.

This crappie fell for a lime-green tube jig.



"Should have been here two weeks ago," Frank said. "I wasn't keeping anything under 14 inches, and yet I was taking home 12 to 15 crappies each evening I fished. Heck, over the winter ice fishermen were catching numbers of crappies in the 16-inch to 17-inch range."

Frank should know. He is the Waterways Conservation Officer whose district includes Shenango Lake.

I had been hearing rumors of the fantastic crappie fishing at Shenango for almost two years. However, remembering lackluster fishing trips to Shenango in the not-so-distant past, I simply had not made an effort to get to the lake until Frank called with an invitation. It was a day of panfishing I'll not soon forget.

During my high school and college years, I fished Shenango at its prime—a new lake filled with cover and brimming with big bass and northern pike. Then over succeeding years, I watched the lake slowly dwindle to a mediocre fishing hole. For years, my semi-annual angling trips to the lake seemed to turn up only small crappies, a few walleyes or an occasional decent largemouth bass.

But there was no doubt about it now. The evidence was in the livewell. Shenango has become a hotbed for crappies.

Up cycle

Why was the lake producing numbers of big crappies? The answer is unclear. Shenango Lake is an Army Corps of

Engineers project on the Shenango River near Sharpville. It was impounded in the mid-1960s. As with most new reservoirs, Shenango went through a boom period of exploding fisheries. But over the years as the inundated cover deteriorated, so did gamefish populations.

Because the waterway is a flood control reservoir, the ups and downs of the lake level prevented beneficial vegetation from becoming established. In addition, the same rise and fall during the spring played havoc with the spawning success of many species.

Through the years there were highlights, including occasionally good years for stocked walleyes, muskies and hybrid striped bass. While white crappies were

always in abundance, few were of quality size. Of course, there were exceptions—like a state record crappie taken at Shenango about seven years ago.

Then a couple of seasons ago, angling scuttlebutt harped on numbers of big crappies at Shenango. Several trips to Shenango this past year verified that the talk was completely accurate.

Freeman Johns, Commission Fisheries Technician, summarized the 1995 Shenango survey. “The crappie population looks real good with some very nice specimens,” says Johns. “The majority of crappies taken in the survey were about nine inches, but there were good numbers at 12 inches and greater. We also found a lot of four-inch crappies, which would indicate a good population coming on for the next few years.”

He went on to remind me that crappies are cyclic in nature. In many lakes, it's not uncommon to have a few boom years followed by years of poor production.

“As far as the Shenango boom goes, it is not the result of anything that was done to the lake by fisheries management. It's just a natural thing.”

Black-and-white issue

No matter what brought about numbers of quality crappies, anglers certainly are enjoying excellent fishing. It is one of the most impressive crappie fisheries I have encountered in Pennsylvania.

Even more surprising is the strength of the black crappie population in a lake that was entirely white crappies 20 years ago.

Although white crappies and black crappies often inhabit the same water, because of habitat preferences one is usually dominant. Black crappies tend to prefer clearer water with lots of vegetation. White crappies prefer more turbid water which lacks vegetation. One species will dominate because it can feed and reproduce more effectively in a specific habitat.

The nature of Shenango (off color, no weeds) would seem to favor white crappies. However, the Commission survey netted more black crappies than whites. Yet, anglers who regularly fish the lake catch more whites than blacks. But, as I witnessed, many of the black crappies are extremely large specimens.

Fish-catching techniques for crappies are basically the same, whether black or white. The only noticeable difference is that black crappies tend to bite earlier in the spring than white crappies.

Spring techniques

According to John Geiwitz, another dedicated Shenango angler like Parise, there's really nothing fancy about crappie techniques at the reservoir. The standard minnow and bobber fished around cover takes springtime fish from ice-out to early June. A clip-on or fixed float works fine for the shallowest fish, but if the crappies are deeper than three or four feet, a slip float rig is best. As far as a live bait, Geiwitz says to forget the tiny “crappie” minnows sold at some of the bait shops around the lake. They are too small. Buy medium fatheads about 1 1/2 inches long because these are big crappies.

In the spring, small jigs are as deadly as live minnows. Marabou, twister tail, or tiny tube jigs in the 1/32-ounce to 1/16-ounce size are best for spring fishing. That's all many anglers carry when they go crappie fishing. In terms of color, Parise favors chartreuse, white or red/white. Geiwitz says the secret Shenango crappie color is purple.

Often, when the fish are aggressive, a jig-spinner or crappie-size spinnerbait takes more crappies than a still-fished minnow. A throbbing and flashing blade is particularly attractive to fish in off-color water.

Location

It's not so much what you fish, but where you fish it. To catch crappies, you have to find them. At Shenango there is good news and bad news regarding locating fish. The good news is that there's a lot of classic crappie cover and structure in the lake. The bad news is that fish will not be found at all the good spots all the time. Because crappies move around quite a bit, the trick is to eliminate unproductive water quickly.

That day in mid-May with Parise started out slow. In the morning we fished in the Clark and Golden Run areas on the Shenango River arm of the reservoir. That is where Frank had been wading for crappies a couple of weeks earlier. He had been taking fish in one to two feet of water around stumps. But we managed to catch only a couple of small crappies from these areas.

However, on checking a cove nearer the intersection of the Shenango arm and the Pymatuning arm, we found a school of hungry crappies holding to a brushpile in five feet of water on an old roadbed. The action was fast and furious, but we left the biting fish to check out other sites. Nowhere else produced like that one cove.

A week later I returned to Shenango to fish with Geiwitz and Sam Hovis. They



Shenango white crappie (left) and black crappie (right)

immediately headed to a string of brushpiles in 10 to 12 feet of water along the old canal towpath. There we caught several dozen crappies, but the fish were small.

John's next stop was the very brushpile Frank and I had fished the previous week. But only two crappies were taken in that spot.

Then we headed up the Pymatuning Creek arm of the reservoir. In the center of a particular bay was a submerged hump that crested at three feet. A tiny twig of a small brushpile was barely visible above the surface. From that one spot we took more than two dozen nice crappies—including both white and black crappies over 12 inches.

Later in the day, we also caught crappies from shoreline deadfalls, and along the stump-lined lip of the Pymatuning Creek channel in 12 feet of water. I observed other anglers catching very respectable crappies along bridge piers, too.

The second week in June I returned once again to Shenango with fishing buddy Dave Hornstein. As expected, the shallow-water bite was slowing. We could catch only a sporadic crappie here and there, with one exception—a dropoff at the mouth of a cove. At that spot we caught about two dozen crappies, of which half a dozen were very nice fish.

Summer tactics

When the crappies leave the coves and shallow cover, angling pressure at Shenango drops off considerably. However, for those who continue to search out the fish, crappies continue to bite through the summer.

"Crappies definitely get tougher to come by once the shallow-water concentrations break up following the spawn," says Geiwitz. "Crappies move to deeper water in the summer, but on Shenango that may be only 8 to 15 feet deep. If there is a magic summer depth for crappies at Shenango, I guess it would be 12 feet—with wood cover, of course."

Geiwitz says crappies often hold on a breakline, such as where a flat drops into deeper water, along a creek channel lip, or on the end of a point where they have a habit of suspending just off the break instead of hugging the bottom.

"I like to use a small crankbait to locate and catch summer crappies," says Geiwitz. "A crankbait fishes quicker than a jig, and it produces larger crappies. I fish a 1/8-ounce crankbait with four-pound test on a soft-action spinning rod. By putting a large splitshot on the line about two feet in front of the bait, I can get a small diving crank down to 9 or 10 feet."

When he observes crappies on the depthfinder that are beyond the depth he can reach with his favorite tiny crankbaits, Geiwitz switches to a 1/4-ounce or 3/8-ounce jigging spoon. He counts the spoon down to the depth at which the fish are holding. Then he uses a combination of jiggles and light snapping actions of the rod to entice crappies to strike.

When to go

Crappie fishing at Shenango Lake has developed into almost a year-round activity. According to Parise and Geiwitz, the biggest crappies are taken through the ice. However, they caution anglers that the ice on Shenango can be very unstable because of fluctuating water levels and the current flow through the drawn-down reservoir. Bays are generally safer than the main lake.

Anglers park at access areas near sheltered bays to walk onto the ice. In particular, the sites of Golden Run, Reno's Run, Clark and Chestnut runs, and coves near the Route 846 causeway are popular. The key depth for ice fishing is usually eight to nine feet.

The second peak occurs about three weeks after ice-out when crappies begin turning up in the shallows. These fish are



not spawning yet. In the latter part of April, expect to find crappies in less than four feet of water around barely visible stumps and brush in bays and the leeward side of islands. During this same period, don't overlook deeper eddies on the Shenango River between Hamburg and the backwaters of the reservoir.

Geiwitz points to the month of May as big fish time on Shenango. Crappies begin to move into coves and cuts in preparation for spawning. All crappies in the lake cannot spawn at once, so they literally take turns. In any cove, there may be two or three waves of fish over a period of several weeks. By mid-June most of the shallow water spawning is complete.

Here's one tip to point you in the right direction of late-spring crappies. Black crappies spawn shallower and earlier than white crappies. If your catch of black crappies in the upper arms of the reservoir suddenly falls off, it's probably time to move a little deeper (and probably closer to the dam) in search of spawning white crappies.

The major forage for Shenango crappies is young-of-the-year gizzard shad. In the summer, some crappie schools follow shad in open water. Other crappie schools tend to hold to structures like main lake points, riprap, abutments, road-bed edges and other dropoffs—especially if brush or stumps are present. It is much easier to locate and catch crappies relating to structure than crappies trailing shad.

Geiwitz points to a final crappie fishing peak in the early fall, just before the lake turns over. Crappies follow shad into the shallows on an annual feeding spree. The fish may be found in some of the same areas as they can be found in spring.

As an Army Corps facility, fees are now charged to launch at the primary ramps on the lake. The Shenango Recreation Area near Clark just off Route 18 is the easiest ramp to reach and therefore is the busiest ramp on the lake. Mahaney Recreation Area at Sharpsville is an excellent ramp, and usually not as busy. There are five other secondary ramps with limited parking. Launching is difficult at these areas if the water is low.

Shenango Lake is about 25 miles downstream from Pymatuning Lake. Historically one of the state's best crappie lakes, Pymatuning has been in a crappie-deficient slump for several years. Shenango, on the other hand, is stealing headlines and may be on the way to establishing its own crappie dynasty. Don't miss the action!

ANGLER

Other Shenango Species

According to the 1995 Commission trap-net survey, fishing in the near future at Shenango Lake is looking up for several species. In addition to the crappies, there are two good year classes of walleyes, the first of which should be reaching 15 inches in 1996. Also, a number of hybrid stripers between 22 and 27 inches were taken in the nets. Channel cats, as in past years, are excellent. Previous surveys indicated a good musky population.

However, according to anglers, the status of largemouth and smallmouth bass populations remains questionable. Shenango has been under Big Bass regulations for five years. Most bass fishermen rate the lake below average for both size and numbers of bass compared to other northwest lakes. Yet, once in a while, an angler experiences an exceptional day of catching bass at Shenango. Some fishermen speculate the roving schools of shad tend to keep the bass in open water during the summer where they are less likely to be caught.

One somewhat unusual panfish encountered by crappie anglers on Shenango is the green sunfish. Although native to western Pennsylvania, few fishermen are able to identify it because it is rarely caught on other lakes. This small sunfish with a big mouth aggressively strikes crappie jigs and spinners. It looks like a cross between a rock bass and a bluegill. So the next time your fishing partner is puzzled by a strange-looking sunfish on Shenango, you now have an answer.—DB.

Trout Stamp Art Rules

The Fish and Boat Commission is seeking wildlife artists to participate in the 1997 Trout/Salmon Stamp and Print competition by submitting a work featuring one of the Commonwealth's most scenic streams.

The juried contest is an annual event, with entries from artists throughout the United States. The winning entry will be depicted on the Commission's Trout/Salmon Stamp in 1997 and will be reproduced in several limited edition prints. Artists looking to compete for the 1997 title must depict one of a select group of streams.

<i>County</i>	<i>Stream</i>
Berks	Tulpehocken Creek
Cameron	Sinnemahoning Creek, Driftwood Branch
Cameron	Sinnemahoning Creek, First Fork
Centre	Spring Creek
Centre	Bald Eagle Creek
Centre	Penns Creek
Clinton	Fishing Creek
Crawford	Oil Creek
Cumberland	Yellow Breeches Creek
Cumberland	Letort Spring Run
Dauphin	Clarks Creek
Franklin	Falling Spring Branch
Huntingdon	Little Juniata River
Jefferson	Clear Creek
Lackawanna	Ash Creek
Lawrence	Neshannock Creek
Lycoming	Loyalsock Creek
Lycoming	Cedar Run
Lycoming	Slate Run
Mifflin	Penns Creek
Northampton	Monocacy Creek
Philadelphia	Wissahickon Creek
Pike	Toms Creek
Potter	Kettle Creek
Potter	Sinnemahoning Creek, First Fork
Potter	Sinnemahoning Creek, East Fork
Schuylkill	Little Schuylkill River
Somerset	Ilers Run
Sullivan	Loyalsock Creek
Tioga	Cedar Run
Venango	Oil Creek
Westmoreland	Mell Creek, South Fork

The scene may include angler(s) and/or trout. However, the primary focus should be the stream. The work may be in oil, acrylic or watercolor and measure 12 inches by 18 inches with a one-inch border. Artists must submit a completed entry form with the image. Noted on the form must be the stream depicted. Entries will be checked for authenticity.

The top entry will be featured on the stamp, required for all licensed trout anglers. The winning artist will receive up-front payments of \$3,000, as well as fees for signed prints, stamps and mini-prints. The original work will become the property of the Pennsylvania Fish and Boat Commission.

Second- and third-place winners will be awarded \$1,000 and \$500 respectively.

The Commission held the initial art contest to select the 1991 "First-of-State" stamp. That stamp featured an aggressive brook

trout—Pennsylvania's official state fish. Subsequent stamps featured brown trout ('92), rainbow trout ('93), brook trout ('94) and most recently steelhead trout ('95).

The 1996 edition, which goes on sale December 1, 1995, introduces a new series of stamps featuring the state's world-famous trout streams. The first of series features Harvey's Creek in Luzerne County as depicted by artist Robert Kray. His 1994 brook trout was also the first winning entry by a Pennsylvania artist, so he became the first two-time winner in the contest's history.

Another first for 1996 is a Trout/Salmon Stamp collector's patch. The colorful patch features the winning design of the 1996 Pennsylvania Trout Stamp. Both the patch and limited edition art prints are officially Pennsylvania Fish and Boat Commission-endorsed and are available directly from the publisher: Wilderness Editions, RD 1, Box 73, Warriors Mark, PA 16877 (phone: 800-355-7645).

For more information on the 1997 contest, including the official rules of entry, artists should write to Timothy L. Klinger, Trout/Salmon Stamp Program Manager, Pennsylvania Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000, or call (717) 657-4537.—*Dan Tredinnick.*

The Law and You by Jeff Bridi

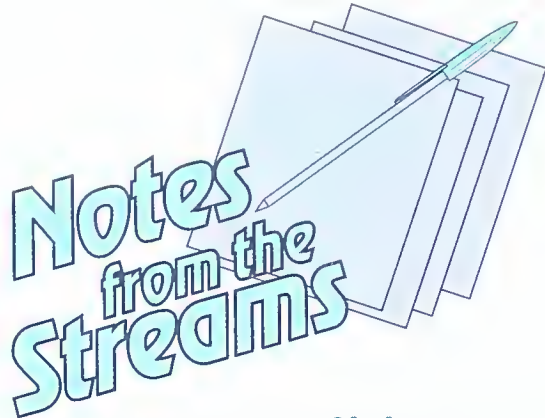
"What are the regulations about the trout/salmon stamp?"

The Commission established the trout/salmon permit in 1991 to better protect and manage the trout and salmon in the waters of the Commonwealth. It is required for any licensed angler who fishes for trout or salmon in Pennsylvania. Fishing for trout and salmon includes: 1) to catch, kill or possess a trout or salmon while fishing, 2) to fish in any specially regulated trout water or any wilderness trout stream, and 3) to fish in any stream or river designated as an approved trout water from the opening day of trout season until the first Saturday in May.

People who are going to fish for trout are required to write their signatures on the face of the stamp and then attach the stamp to their licenses. Anglers may not simply carry a loose stamp with them to meet the requirements of the regulations. Additional stamps are available for those who want to collect them.

Senior citizens who purchase a senior resident lifetime license and wish to fish for trout or salmon must purchase a trout stamp but are required to buy only one. They must then sign and attach that stamp to their senior resident lifetime license and are then exempt from purchasing stamps in subsequent years.

As trout season opens, remember that the success of the trout stocking program depends on the cooperation of many private landowners. Please be responsible guests while fishing. Carry a spare litterbag and leave the streamside a little cleaner than when you arrived. Take time to thank the landowner for allowing public access to private property. Fishing opportunities for our children and for years to come depend on the considerate behavior of all anglers today.



Out of the mouths of babes

One of the most enjoyable parts of my job is talking with students. Recently, Officers Carter, Nestor and I had the opportunity to educate second-graders at Elk Valley Elementary School on water safety, littering, and fishing.

While Officer Carter was speaking on fishing seasons, sizes and creel limits, one young angler spoke up to tell us he once had caught an undersize trout. He went on to say how, even though his father wanted to sneak the trout out with the rest of their catch, he let it slip back in the water because he was aware of the rules. Officer Carter praised the boy for his integrity and knowledge and on his ability to catch his limit. The young boy replied he indeed knew the rules and "every time my dad and I each catch a limit of fish, we always take them home before going to another creek to catch more."—WCO John Bowser, western Erie County.

"Safeguarding" the Commonwealth's Resources

On April 12, 1995, while on patrol on the South Branch of Muddy Creek in southern York County, I noticed unusual objects in the water near one of the pools holding preseason trout. The objects turned out to be a partially submerged safe and a completely sunken cash register that, as I later learned, came from a burglary at a VFW post in Lancaster County. Shortly after notifying York County Control for assistance, Pennsylvania State Trooper Ralph Maiolino arrived and we discussed our options for fishing out the safe and cash register.

Because our options were limited by the weight of the safe and the fast-flowing 45-degree water, we chose to call for a rollback wrecker, a truck that uses a winch and cable to pull vehicles up on to its flat bed. About a half-hour later, George Feilinger, from George's Towing in Delta, Pennsylvania, arrived, looked at the safe and cash register, and said, "No problem. I'll get them right out."

George backed his truck as close as possible to the edge of the creek's bank, and then extended the truck bed about six

feet out over Muddy Creek. With the skill of a tightrope walker, George eased himself down the slippery truck bed and gently stepped out on top of the safe. As he lowered the steel winch cable and hook into the water, I said, "Do you know that you are fishing in approved trout water during the closed season?" George smiled when I said that there would be no need for writing him a citation, and he went back to hooking the safe.

Moments later George had hauled the safe out of the creek and had it secured on his truck.

George further demonstrated his fishing skill by taking only a few minutes to retrieve the sunken cash register by casting out a heavy chain on the end of a rope and snagging the cash register's electric cord. It was amazing to see him perform a roll cast with a tow chain.

As George secured the day's catch on his truck and trooper Maiolino and I exchanged paperwork, a blue pickup truck pulled in nearby. From the truck emerged a pretty young lady: George's girlfriend, Wendy Ray. She had heard the radio call about the safe in the creek and drove nearly 20 miles thinking that George may need dry clothes when he had accomplished his mission. Because of her devotion to George, Trooper Maiolino and I both agreed that George should marry Wendy as quickly as possible. After all, when you think about it, how many anglers' wives do you know who would drive 20 miles with dry clothes for their men when they were fishing?—DWCO Mike DeLuca, Southern York County.

Wildlife ID 101

Now and then, well-meaning but ill-informed people approach me with concerns for the local wildlife populations. Here are a few examples:

"Someone shot a pink flamingo with an arrow."

Translation: Great blue heron.

"There are two sick seals on the ice at Decker Pond."

Translation: River otters.

"There's a big white wolf running around."

Translation: Siberian husky.

"There's an armadillo under my dock."

Translation: Opossum.

"There's an alligator in Shohola Lake."

Translation: Too much cheap wine?

Maybe the Game Commission has new stocking programs we're not aware of.—WCO William Carey, Wallenpaupack.

Check for changes

Several fishing and boating regulations have changed in the last year. Please take a few minutes to read the summary books you receive with your boat registration or fishing license.

Some trout waters have been changed to reflect "special regulations areas" where there are different minimum sizes and limits.

With the 1995 boating season, Type IV personal flotation devices such as seat cushions were no longer be accepted as the primary life saving device. All boats must now carry a wearable personal flotation device for each person on board. In addition, new regulations relating to children operating watercraft have been enacted.

To make your outdoor experiences more pleasurable, please take the time to review your summary books.—WCO Lee Creyer, southern York County.

Excuses, excuses

During the 1994 inseason trout stocking of a local stream, Northeast Region Manager Kerry Messerle spotted a man taking more than his limit of fish. The man caught seven fish, placed them in his van, and then harvested six more fish—putting him five over the legal limit. Before I was able to respond, the man drove off. However, with the description of the van and the license plate number, I was able to locate and stop the violator.

The following is a list of the excuses made by the violator while I recovered the illegal trout and wrote out the required paperwork:

"I don't know how many trout I have...How many do I have?"

"What is the limit?"

"I don't get to fish that often."

"You guys never stock the streams anymore."

"I fished the Lehigh the first day and never caught a trout."

"Do you know (so and so) and (so and so)? Why don't you call and talk to them?"

"I paid the fine for these five extra fish, why can't I keep them?"

"How did you know how many trout I caught? Never mind, I know, I saw you in the woods with your binoculars."

This person paid a \$75 fine on a field acknowledgement of guilt, and has since had his fishing license revoked for one year. Perhaps he now realizes that WCOs will not fall for any excuse.

Eight excuses trying to get out of one violation—I wonder if that's a limit?—WCO William Carey, Wallenpaupack.

Hindsight is 20/20

While patrolling the delayed-harvest, artificial-lures-only section of Buffalo Creek last April, I encountered two anglers illegally using bait. Although they were fishing directly across from a large, brightly painted wooden sign declaring the special regulations, the anglers claimed to be unaware of the "new rules" (which were three years old). In addition, they nearly hit a signpost holding a special regulations poster when they opened their car door. After citing them, I drove away noting the good job Arrowhead Trout Unlimited and Buffalo Valley Sportsmen had done posting the stream. The next sign I encountered was mounted at a parking area, complete with a large pair of glasses for those who may have trouble "observing" the rules.—*WCO Bruce Gundlach, western Armstrong County.*

Mayday, mayday...eject, eject

It was a warm, sunny autumn day in a remote section of northern Centre County when a deputy (who shall remain anonymous) and I drove our patrol vehicle along an abandoned railroad. As we drove along, the deputy at the wheel, a sun-livened yellow jacket entered the window. The driver was unaware the bee had landed on his shoulder, and I attempted to caution him.

What happened next was a blur. The driver swatted, the bee stung, the vehicle stopped, the siren began to wail (the floor switch had been tripped), and the driver was missing.

All comedy aside, had the driver been allergic or on a busy roadway, this could have been a serious situation. But in this case, we only knew that the ejection seat operated flawlessly and we wouldn't be able to surprise critter or culprit for miles.—*Brian B. Burger, WCO, Centre County.*

Persistence pays off

While eating lunch one day along the Susquehanna River, I had the privilege of being in the presence of a great angler. Hearing a loud splash several feet away, I spied an osprey fishing for its lunch.

I watched as it caught a smallmouth bass and flew to a nearby tree to dine. After it had finished off the fish, the osprey once again dived into the water. This time it grabbed a much larger fish, and after three failed attempts to become airborne, took a moment to think over the situation. Determined not to lose its catch, the osprey stroked its wings in the water, "swimming" out to the faster current. Carried by the

swifter current, the osprey gained enough momentum to take flight.

The smallmouth bass the osprey flew away with would have been a prize to any angler. And by the way, that bird caught more fish than any other angler I encountered that day.—*WCO Lee Cryer, southern York County.*

Quick cash

After arresting and processing a man for boating under the influence, DWCO J.K. Carey and I found ourselves, with the defendant, standing in front of a MAC machine. Picture a man clad in a tank top, shorts, sneakers and handcuffs, with a uniformed officer on each side, at a MAC machine at 2:00 a.m. He places his card in the machine, punches in his personal ID number, and withdraws the amount needed for bail. Once back at district court, he is released to a friend.

This brings new meaning to statements like "when you need cash fast" and "never leave home without it."—*WCO William Carey, Wallenpaupack.*

Dispose of trash properly

Years ago it was acceptable to dispose of waste in a stream. It's easy to see why many homes were built next to flowing streams—and it wasn't for the aesthetic value.

As time passed, it became apparent this was not a proper use of our streams. We instituted laws and built disposal sites and sewage plants to control this problem. We've come a long way, but there is still the problem of the burn barrel or trash-burning site near some streams in the more rural areas. The barrel gets full and is accidentally or deliberately dumped on the stream bank. High water then cleans up the ground where trash is burned or dumped.

This archaic method of disposing of trash is not only unsanitary, it is blatantly illegal. I'm afraid a few households will continue to learn the hard way and suffer some severe financial setbacks regarding their method of trash disposal.—*Larry Baker, WCO, Juniata/Mifflin counties.*

Unsung heroes

We often hear of the people who litter and leave piles of trash, causing landowners to close areas to fishing. These unthinking and uncaring people cause everyone to lose good fishing access areas every year.

However, there is another group that is generally not recognized because its activity goes unnoticed and unpublicized. They are the individual anglers who carry

trash bags with them and pick up the litter left by others. Every week I see anglers carrying out trash to be properly disposed of.

I'd like to thank all the unsung heroes for their kind and thoughtful efforts to keep the streams open.—*Warren W. Singer, WCO, Bradford/Sullivan counties.*

A lesson learned

Safe Harbor Dam on the Susquehanna River is one of the sites for installation of fish lifts for the shad restoration project. While patrolling the area, which has been restricted to protect anglers from the dangers of blasting during construction, DWCO Jesse Benefiel and I beached our patrol boat to discuss our activities with a Safe Harbor manager and Lancaster County deputies.

After a few minutes, Deputy Benefiel and I returned to the patrol boat only to find it stuck hard and fast on the rocky shoreline. Although I had checked the boat to make sure it was still secured during our brief time on shore, I failed to notice that the river level had dropped nearly a foot. Embarrassed, I radioed for assistance from the Lancaster County DWCOs and the Safe Harbor manager. They contacted the dam control room and enough water was discharged to allow the boat to be dislodged.

What can be learned from this? Always be watchful of your surroundings when on the water, especially on impoundments with hydroelectric power stations that raise and lower the water levels. Use these suggestions to stay out of trouble:

- Stay alert for warning signals and lights. Safe Harbor Dam and Holtwood Dam always warn of changes in water levels well in advance of the discharges.

- Wear your personal flotation device—or at least keep it within arm's reach. You may only have a few seconds before your boat is in a dangerous situation. Keep your PFDs readily available. Don't store them away.

- Never anchor your boat from the stern. Rising water rushing against the transom will quickly swamp your boat.

- If you anchor your boat, keep a sharp knife handy to cut the anchor line if it becomes fouled. If time permits, you can untie the rope, tie a plastic jug on the free end and come back for it when conditions are safe.—*DWCO Mike DeLuca, southern York County.*



Updated, Revised Publication

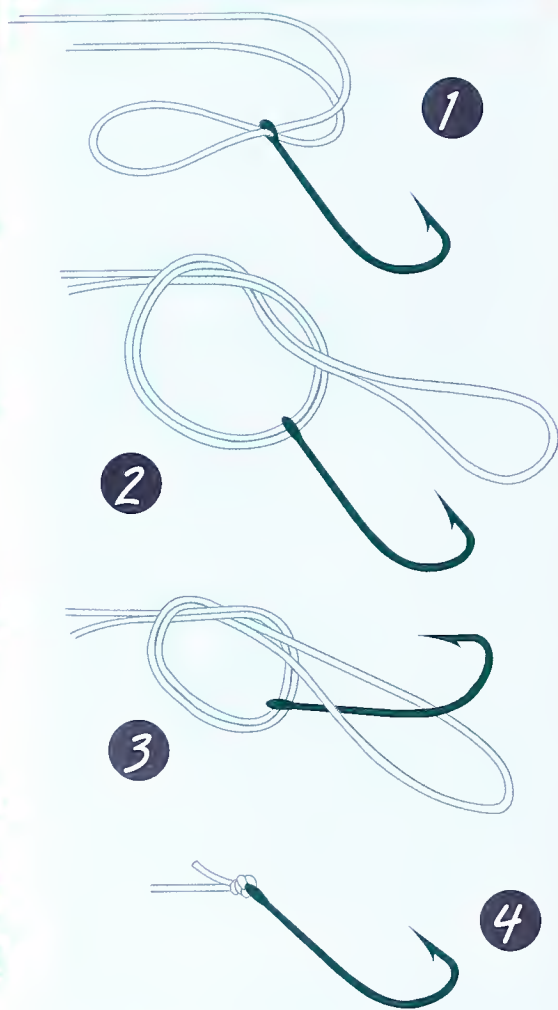
"Personal Flotation Devices" is a completely revised and updated publication available from the Commission. The full-color pamphlet explains what a personal flotation device (PFD) is, laws about PFDs, types of PFDs, who has to wear a life jacket, and how to choose one. Also included is information on caring for PFDs.

Single copies of this pamphlet are free, but please include a business-sized self-addressed, stamped envelope with requests. Contact: Publications Section, Pennsylvania Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.

Conservation Leadership School

Penn State's Conservation Leadership School will hold three sessions this summer at the University's Stone Valley Recreation Area near State College. Secondary school students between the ages of 15 and 18 are eligible. The 1996 dates are: Session I, June 30-July 13; Session II, July 14-27; and Advanced Session, August 1-10. The Advanced Session is open only to students who previously attended a regular session. To register by phone or more information, call 1-800-PSU-TODAY (1-800-778-8632).

Angler's Notebook *by Seth Cassell*



The Palomar knot is easy to tie and very strong, and is perfect for attaching a hook to the end of monofilament line—as you would when using bait for trout and other species. First, make a 5-inch loop in the line and send the loop through the hook eye. Second, tie a loose overhand knot in the line, keeping the mono strands from overlapping and twisting. Third, pull the hook completely through the loop. Fourth, pull both ends of the line to tighten.

For fishing small lakes and impoundments, you can make a quick, inexpensive depthfinder out of a large sinker and a piece of string. Use a one-ounce or two-ounce bank sinker. Tie the sinker onto the end of the string with a clinch knot or a Palomar knot. Then tie an overhand knot every foot up the line. When you want to use it, simply drop the sinker to the bottom and note which mark is at the surface.

Crappie fishing is often overlooked in March, but it can be quite good soon after ice-out. Concentrate your efforts in shallower areas that receive a lot of sunlight. Be sure to work your bait and lure slowly. One effective tactic is to let a small, live minnow sit in a likely area next to cover. See page 23 of this issue for more details.

Fly fishermen can get an early start matching the hatch this month. On sunny days, many streams yield good hatches of blue-winged olives, blue quills, midges and stone flies. Typically, these hatches occur during the warmest part of the day, which is usually in the afternoon. Because many waterways are closed to trout fishing before opening day, be sure the water you are fishing is open before heading out.

For river fishermen, a propeller guard is a necessity. There are several types available on the market, and they can be purchased through catalogs and at most sporting goods stores and marine dealerships. They protect your prop and lower unit when fishing in rocky areas and around unseen obstructions.

Lures, especially spoons and spinners, can be most effective if there is a bit of red on them. Fish are naturally attracted to this color, mainly because red can represent the gills of a baitfish or imitate a wounded fish.

Illustration—Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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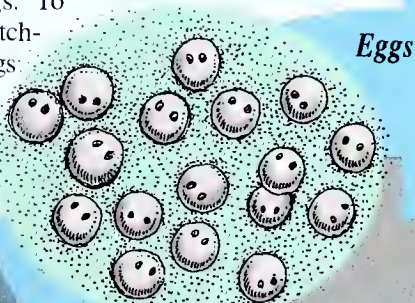
Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

From Egg to Creel: The Life of a Hatchery Trout

EGGS

Eggs are collected at Commission hatcheries from late August to early November. Rainbow trout are the first ones to be spawned. Brown trout are the latest. Eggs are collected from fish called "brood stock." These 2-year-old to 4-year-old fish are the best of the best. They are selected because of their size and growth, color, and the size and number of eggs produced. On average, a 3-year-old female will produce 3,800 eggs. To make sure there are enough catchable trout a year later, three eggs are collected for every one fish stocked. Sperm from one male is mixed with the eggs from one female. Fertilized eggs are placed into large egg jars or trays. In 50-degree water temperatures, rainbow trout eggs hatch in 31 days. Brook trout eggs hatch in 44 days, and brown trout eggs hatch in 41 days.

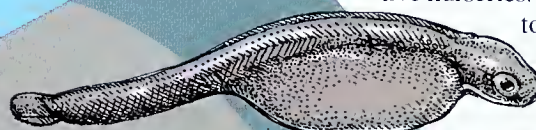


Eggs

FRY

There are two fry stages: Yolk, or sac fry, and swim-up fry. Sac fry, fresh from the egg, are nourished from the yolk for two to four weeks, so they aren't fed. Once the sac is absorbed, the young fish swim up from the bottom and are fed fine granular feed—about the size of black pepper. At this time they are moved into large, long tubs.

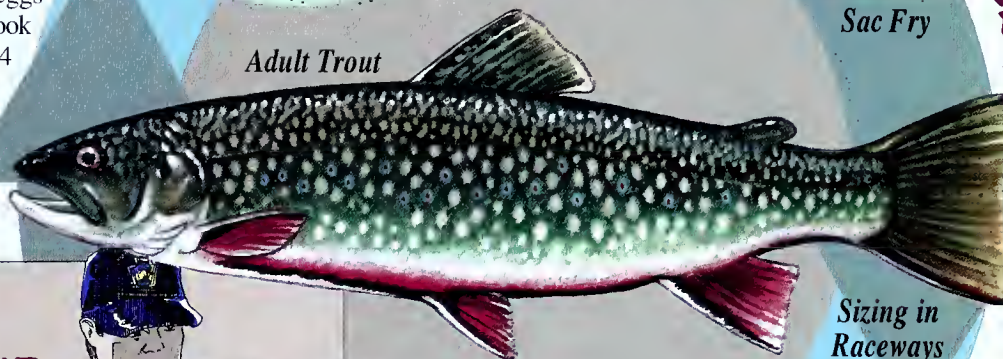
These tubs, which are about the size of a large bathtub, hold about 50,000 fry. Fry are fed 6 to 10 times each day. After 8 to 10 weeks, most of the young trout are moved outside into raceways. Some are stocked in streams where they can grow to adults. Others are provided to the Commission's cooperative nurseries. They raise these trout to catchable size.



Sac Fry

FINGERLING TO ADULT

It takes 12 to 14 months for the trout to grow to catchable size. During this period they are fed pellets 3 to 5 times a day. This is when they really grow. On average, it takes 1.6 pounds of food to make one pound of trout. Also during this period the fish are separated by size. Fish culturists call this "grading and sorting." By doing this the bigger, more aggressive fish aren't with the "runts of the litter."



Adult Trout

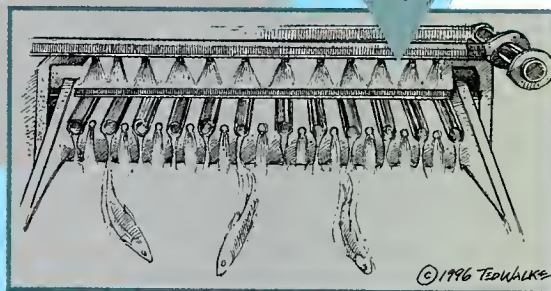
Sizing in Raceways

TROUT STOCKING

Some 15 months are needed to take a trout from an egg to your creel. By now they are 10 inches or longer. At each hatchery in the spring, fish are weighed, counted and loaded into stocking trucks. Each truck has a 1,200-gallon tank with an aeration and oxygen system. This ensures that the fish are healthy when they arrive at their destinations. Each truck carries from 3,000 to 3,600 catchable trout. Fewer trout are loaded in the tank if the fish are big or will travel long distances. When they arrive, the fish are stocked—and we catch them!



Trout Stocking



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TROUT FOOD

The food trout are fed in the hatchery is made mostly of fish meal. Ocean fish like herring and menhaden are processed and nutritional supplements (vitamins) are added. This mixture is formed into pellets for adult trout and smaller pieces for fingerling and fry. This feed has lots of protein, much like feed for livestock.

Fry fish meal

Fingerling fish pellets

Adult trout fish pellets

Food shown
actual size



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Straight Talk

Commonwealth Leaders' Direct Interest in Our Resources

Another spring fishing season is now underway as anglers across the Commonwealth enjoy unsurpassed fishing and boating opportunities. As I traveled around the Commonwealth in the late winter and early spring, I was gratified to meet many deputy waterways conservation officers, volunteers who work at cooperative nurseries and others who freely give of their time and effort to support the Fish and Boat Commission. I spoke to anglers who helped stock trout, and I was delighted with their reports about the wonderful fish supplied by our fish culture stations and the cooperative nurseries.

In Pennsylvania we are fortunate to have a great diversity of natural resources. We are also fortunate to have public leaders who take a direct interest in these resources and the groups that work to protect them. Governor Tom Ridge is one such leader. A sportsman himself, Governor Ridge has created the Commonwealth's first Sportsmen's Advisory Council to keep him and his staff abreast of items of importance to the state's many hunters, anglers and boaters.

The Fish and Boat Commission has had the privilege of including the Governor and his staff in a number of recent events. Both Governor Ridge and Lieutenant Governor Schweiker beat the rush and bought their 1996 fishing licenses and trout/salmon permits early. The ceremonial events in these photos are important because they show the interest and support of the Commonwealth's senior leadership for outdoor recreation. But there are other memorable fishing events that occurred this spring that can't be shown in photographs. Of these, none is more important than the thrill you, your friends and families felt when you tossed those first lines into a trout stream at 8 a.m. on opening day. For Pennsylvania anglers, fishing makes memories that last a lifetime.

Peter A. Colangelo



Peter A. Colangelo
Executive Director
Pennsylvania Fish & Boat Commission



Governor Ridge buys his 1996 fishing license and trout/salmon permit. First row left to right are Commissioner Paul J. Mahon, Governor Ridge, and House Fish and Game Committee Chairman Bruce Smith. Second row left to right are Commissioners Leon Reed and Donald K. Anderson; Commission President Gary Pflugfelder; Governor's Sportsmen's Advisor Vernon Ross; Commission Executive Director Peter A. Colangelo; Commissioners Inky Moore and Wayne Yorks; Commission Deputy Executive Director Dennis T. Guise; and Commission Bureau of Administrative Services Director Wasyl Polischuk.



Lieutenant Governor Mark Schweiker buys his 1996 fishing license and trout/salmon permit at the Harrisburg Sports and Outdoor Show, last February. Left to right are Commission Executive Director Peter A. Colangelo, Representative Stanley A. Saylor, Lieutenant Governor Mark Schweiker, and Commissioners Inky Moore and Paul J. Mahon.



After purchasing his fishing license and trout/salmon permit, Governor Ridge reviews the new Commission Fishing & Boating Map.

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Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

Lake Redman Crappies by Seth Cassell.....	4
Update: Easton's Lehigh River Fishway by Dave Arnold.....	6
How to Avoid 11 Common Float Fishing Mistakes by Gerald Almy.....	7
The Orange Fish Hawk by Chauncy K. Lively.....	11
On the Water with Charles F. Waterman	13
Maps Useful to Pennsylvania Anglers	14
Cast & Caught	15
Branches of the Juniata by Mike Bleech.....	16
Flies, Flutterspoons and Darts: Upriver Shad Fishing by Vic Attardo.....	20
The Green Drake Mystique by Charles R. Meck.....	24
SMART Angler's Notebook by Carl Richardson.....	31

The brown trout on this issue's front cover was photographed by Barry & Cathy Beck.

Biologists at work

Richard Snyder, Chief of the Commission Division of Fisheries Management in the Bureau of Fisheries, recently sent me the 1996 field schedule for our area fisheries managers (AFMs). This document includes some 30 pages of single-spaced listings for waterways throughout Pennsylvania and the research that will be conducted. The work of the AFMs, with the activities of the Coldwater and Warm/Coolwater units, Lake Erie Research Unit and the Division of Environmental Services, is the Commission's main source of scientific information and data on our waterways.

"The work frequently forms the basis for many proposed rules and regulations as well as agency position on numerous issues," Snyder says. "With this work the Commission also researches and considers suggestions and proposals from the angling public.

"One emphasis of all this work is to update our management plans and evaluate current management techniques, including stocking, no stocking, regulations and habitat manipulation. Furthermore, our biological staff continues to monitor various fish populations."

The Fish and Boat Commission has eight AFMs, one Coldwater Unit Leader and one Warm/Coolwater Unit Leader in addition to a Non-Game/Endangered Species Unit Leader. The eight management areas are delineated by watershed boundaries.

"The focus of the majority of our time in recent years has been on warmwater/coolwater species, not trout, as some anglers might think," Snyder says. "Through on-the-water surveys and biological sampling, we learn what Pennsylvania anglers are catching as well as what they *don't* catch. Many of our field activities are behind-the-scenes work that contributes to Pennsylvania anglers' enjoyment."—Art Michaels.



Lake Redman Crappies

by Seth Cassell

Good crappie fishing can be found in many of the Commonwealth's waters, but anglers residing in the southeastern and southcentral part of the state will not find too many places better than Lake Redman. Lake Redman, an impoundment located just south of York, was created in 1966 for the purpose of supplying water for the York area. For the region, Redman is about average in size—290 acres. Its average depth is around 17 feet, but in some areas it can be as deep as 40. The lake is owned by York Water Company, but in cooperation with York County it is part of the surrounding William H. Kain County Park, a picturesque public recreation area.

Redman's crappie fishery

Lake Redman has long been known as having an abundant crappie population, most of which is white crappies. At one point in its history, anglers once complained that Redman had "too many" crappies. Fish and Boat Commission Area 6 Fisheries Manager Mike Kaufmann also recognizes Redman's worthiness as a crappie fishery. "We've been looking at the crappie population at Lake Redman since 1982 because it is a very important aspect of the Lake Redman fishery. Since then, the crappie population has varied between average and very high in density," he says.

If you are looking to catch a lot of large crappies, then Lake Redman might not be the place for you. But if you are looking for some fast action with a lot of average-sized ones, Redman should suit your style just fine.

Kaufmann recently surveyed Lake Redman's crappie population. He says that the results show an "excellent number" of crappies up to 8 and 9 inches long. But once past the 9-inch mark, he says that the number of fish available begins to taper off. Despite this, Kaufmann says, "There are always crappies up to 14 inches in Lake Redman."

Spring hotspots

As most anglers know, crappies are real

suckers for good cover. Cover offers them protection and concealment from predators. Crappies can use the available cover to ambush prey. Good crappie cover includes areas with rocks, submerged stumps, brush piles and fallen trees. Find some good cover in the right spot, and you may be on your way to some excellent spring crappie fishing.

Many spots on Lake Redman can offer good crappie fishing at one time or another. As they say, crappies are "where you find them." However, there are a few spots that Redman anglers consider "hotspots."

Ron Boyle lives on Lake Redman and is a diehard panfisherman. While other anglers are out throwing lures over the lake's abundant bass population, Boyle is quietly casting for crappies, perch and bluegills. "I spend a lot of time fishing in May for crappies at Lake Redman. It is definitely one of the best times to be on the water. There have been times when I've been out there and lost count of how many crappies I'd caught after 20," he says.

Boyle doesn't usually venture too far from the boat dock. He says that the surrounding area is best for spring crappie fishing. "East of the boat dock is a good area. Other productive spots are in some of the backwater areas in the vicinity of the dock. These areas are where I catch a bulk of my crappies," Boyle says.

"I've never tried it myself, but I've heard that a lot of guys do real well in the spring working minnows in some of the rocky areas close to the dam."

Kaufmann also had some insight on where some of the best locations are from surveys and angler reports. During surveys, he found the highest concentration of crappies at the lower end of the lake. There are three coves along the northern shore between the boat dock and the dam. "This is where we see the most crappies during our surveys," he says.

The Interstate 83 bridge, which crosses Redman approximately at the middle of the lake, is one of the most popular crappie

fishing locations. Kaufmann says, "I see a lot of anglers fishing in the vicinity of the I-83 bridge. It is a very popular spot, and crappie fishermen there seem to be successful. I have seen anglers fishing in the middle of the day and pulling out a crappie every two minutes."

Although the upper portion of the lake is not fished often by anglers, Kaufmann says that anglers should not overlook doing so. According to their surveys, he says that they sometimes find an "abundance of crappies" in this area.

Lures, tactics

One would think that Boyle, who catches truckloads of crappies at Redman throughout the year, would have a large tackle box full of colorful crappie jigs and lures. But this is far from the truth. He relies exclusively on one bait—nightcrawlers. "I've found that nightcrawlers are simply the best bait on Lake Redman. I'll be fishing nightcrawlers, pulling crappies in right and left, and some guy will come up to me and ask what I'm using. Then, when I tell him, he'll be shocked. I'm not sure why they work so well, but crappies seem to go to town on them," Boyle says.

He does not like to use the entire worm, however. Using 4-pound-test line with a size 8 hook, he recommends threading about an inch of the nightcrawler onto the hook. "If you leave the worm dangling, the numerous bluegills might pick the worm right off," he says.

Spring crappies can often be found close to the shoreline. "I'm a shoreline kind of guy. This is where I concentrate my efforts. The best thing to do for Redman crappies is to take a boat into a backwater or shallow area and slowly fish your way toward shore. I have great success casting a worm with a splitshot toward the shore and then slowly reeling it back toward me. Sometimes you have to be patient, but this method is deadly on Lake Redman crappies, even throughout the summer months," Boyle says.

Small minnows are also productive on Redman and are great "locator" baits. Use a minnow to find the crappies and then switch to jigs, small spinners or nightcrawlers.

As with any crappie water, small crappie jigs are effective on Lake Redman. Chartreuse is a productive color. I've had a lot of success using it on Redman. Other good colors are white, yellow, black and red. On slow days, try using a tube jig with a small rattle inserted. Another good option is to tip your jig with a meal worm or minnow. These, and all other "standard" crappie lures, are good crappie-getters on Redman.

A small canoe or johnboat is perfect for navigating Redman, but anglers need not have a boat. Fishing from the shore in spring can be equally productive. Sometimes shore-bound anglers can actually have the advantage because they can sometimes work the cover better than a boat angler. There are plenty of areas that surround Redman where anglers can walk in and fish.

Best times

Redman is very susceptible to wind. Its geographic location lends itself to some strong winds, to the dismay of anglers. The bad part is that the wind seems to put a stop to the crappie fishing. "When Redman gets windy, I don't do as well. As soon as the wind stops, crappies start hitting again," Boyle says.

When it is windy, do not fish the main channel of the lake. Instead, head for the coves, backwater areas or other spots protected from the wind. You may also want to try using more "aggressive" crappie techniques, such as putting a rattle in your jig or using a small spinner. I have found that these lures can produce when nothing else does when it is windy and the water is choppy.

Many times, catching a bunch of crappies often means simply being in the right place at the right time. But there are certain times when Redman seems to be at its best, according to Boyle. "Early morning and evening are definitely the best times," he says. "I've been out in the afternoon, but

I just don't do too well. Most of the crappies I catch are caught during the evening hours."

Access

Lake Redman can be reached from Interstate 83 off exit 4. There is only one boat launch on Redman, and that is off Church Street. This designated area is the only place where anglers may launch a boat.

The use of gasoline-powered boats is prohibited on Redman, but electric motors are allowed. Also, night fishing is allowed only on Fridays and Saturdays between Memorial and Labor days. In addition, no boating is allowed in the waterfowl sanctuary at the upper end of this waterway.

Lake Redman is a Conservation Lake. This means that anglers may harvest only 10 crappies a day, combined species. There is no minimum size limit.

For more information on Lake Redman or William H. Kain County Park, call the main park office at (717) 771-9440.

ANGLER



Update: Easton's Lehigh River Fishway *by Dave Arnold*

The first documented American shad to migrate into the Lehigh River system since the early 1820s entered on April 27, 1994, at 6:42:56 p.m. In 1994, a total of 87 adult American shad, from April 27 through July 6, 1994, entered the Lehigh River.

The second annual migratory run in 1995 was a great improvement over the 1994 passage. From April 20 through June 30, a total of 872 American shad entered the Lehigh River. The first American shad for 1995 entered the Lehigh River on April 20 at 6:16:30 p.m.

The 10-fold increase is mostly attributable to our constant daily monitoring and maintenance of the Easton fishway, specifically its attraction flow. The American shad is highly sensitive to the attraction flow's water velocity. To attract and provide a swimmable upstream flow, the water in the fishway's entrance chamber must be maintained 6 inches to 10 inches higher than the Lehigh and Delaware rivers' confluence water level outside the entrance chamber. When the entrance chamber's water level falls below this 6-inch mark, its ability to attract migrating American shad is reduced accordingly. Conversely, if the entrance chamber's water level rises above 10 inches, then the American shad's ability to fight the current to enter the chamber is adversely affected.

There are currently three fishways on the Lehigh River located at River Mile 0.0 and 3.0 (Easton and Chain dams, completed in 1993) and at River Mile 17 (Hamilton Street Dam, completed in 1983).

In 1994 and 1995, only the Easton fishway was addressed. We anticipate monitoring both the Easton and Chain Dam fishways during the current 1996 American shad migratory run.

Spawning site locations were documented in late May and early June of 1995 between the Easton and Chain dams. Thirty-four adult American shad were collected during this period. All American shad fry, since 1987, stocked in the Lehigh River at the Triboro Sportsmen's Club in Northampton (River Mile 24.00), were marked with the antibiotic compound octa-tetracycline (OTC). Analysis of 33 adults indicated that 73 percent, or 24, had the OTC mark and were from our stocking program. Their bloodline could be traced to Delaware River shad stock, resulting from our annual egg collecting/fertilization operation at Smithfield Beach in the Delaware Water Gap National Recreation Area.

The remaining 27 percent, or nine, adult American shad did not have the OTC mark. Their origin is unknown, but some possibilities are 1) they are the result of some fry stocking before initiation of our marking system; 2) they are the result of a small population started during the early 1980s when egg and fry survival studies were conducted or when pre-spawning adult American shad were transported and stocked in the Lehigh River; or 3) Delaware

River-reared American shad strayed into the Lehigh River.

The first and second possibilities were made possible by the cooperative work between the Pennsylvania Fish and Boat Commission and the Lehigh River Preservation, Protection and Improvement Foundation.

In late August and September of 1994, young-of-the-year (YOY) American shad were sampled between the Easton and Hamilton Street dams by electrofishing and seining. All YOY American shad caught were the result of our fry stocking program.

In late August 1995, YOY American shad were found only below the Hamilton Street Dam (415 in three seine hauls). The sub-sample of 31 YOY indicated all were from our stocking program. There was no evidence of YOY presence, visually or from seining, in the area between the Easton and Chain dams. The lack of wild YOY presence may reflect the effect of the area's short length (3.0 miles). It may well be that from the time the American shad's drifting eggs are laid in this short area, to the time they hatch and the fry have grown into small fish (fingerlings), they may have already entered the Delaware River.

We will begin sampling earlier in 1996, possibly late July or early August, to better assess the wild YOY between the Easton and Hamilton Street dams.

Sampling in late September of 1995 again found YOY present below the

Hamilton Street Dam, but in reduced numbers (223 in three seine hauls). This time, YOY were present between the Easton and Chain dams but in low numbers (seven in three seine hauls). The downward shift in numbers present below the Hamilton Street Dam from August to September, and their presence below the Chain Dam in September, was expected. This reflects the normal downstream movement of our developing stocked YOY American shad preparing to leave the Lehigh River to start the journey to the Atlantic Ocean.

Wild reproduction of American shad has been documented for the first time since the early 1820s on September 27, 1995. One YOY American shad (142 mm, 5.6 inches, in length) caught between the Easton and Chain dams did not bear our OTC mark and showed consistent wild growth patterns (larger physical size and a different bone growth pattern) similar to the wild YOY American shad in the Susquehanna River. This Commission research was accomplished by Mike Hendricks and Scott Carney. The other six YOY had the OTC mark and were from our stocking program.

We have the final passage count ending August 8, 1995, for other fish species using the fishway. Suckers were not counted because of their preference to ride the fishway. The counts for sea lamprey and American eel may be higher because they are able to pass through our rebar crowder, which raises the fishway floor to the bottom of the observation window.

<i>Species/types</i>	<i>Total passed</i>
Sunfish	565
Bass	448
Carp	338
Catfish	284
Trout	109
Palomino trout	1
Gizzard shad	51
Striped bass	19
Muskellunge	9
Sea lamprey	6
Walleyes	3
Yellow perch	2
American eel	1
Total	1,836

How to Avoid 11 Common Float Fishing Mistakes


by Gerald Almy

Float fishing can offer some of the greatest angling rewards in Pennsylvania. With a mere stroke of the paddle you're immersed in a peaceful scene of rippling currents and silk-smooth pools. Everyday cares seem remote and inconsequential here. The din of traffic in cities and suburbs, ringing phones and strident conversation all seem vague, distant memories once you turn the first bend in the river on a float trip.

Adventure often awaits the float fisherman. There's a constant sense of anticipation and mystery about what the next turn in the river will bring. You can often spot wildlife along the shore—deer, waterfowl, turkey and squirrels are common sights. Occasionally fast, tricky rapids must be negotiated, and always there is the challenge of plotting one's course on the topographic map to see what lies ahead. As far as the quality of fishing goes, drifting into remote stretches of water far from access points always seems to yield heavier catches than trips made near roads.

Even though float fishing can be an enriching experience, to reap such rewards, trips must be carefully planned and executed in a level-headed, thoughtful manner. If not, float fishing can easily turn into a disaster. If you take the carefree attitude that nothing could go wrong once you push away from shore, you're asking for a poor trip. If you are aware in advance of the pitfalls of float fishing and know the best procedures for avoiding them, this sport can provide some of the most exhilarating experiences of your life.

It may seem premature to be thinking of float fishing now before bass season opens, but this is actually a good time to plan how you will execute float trips once the weather warms more and the season opens. There are countless mistakes that can hinder the enjoy-

A man with a mustache, wearing a blue polo shirt and a dark baseball cap with a 'pro staff' logo, is holding a large, dark-colored fish (likely a smallmouth bass) by its mouth. He is standing on a wooden boat, and the background shows a river with green, forested hills in the distance. The fish is held vertically, and its scales are visible. The man's expression is focused on the fish.

The best fishing usually occurs where lots of riffles and minor rapids break the flow between deep pools, providing food, oxygen and holding water for the fish.

photo: Gerald Almy

ment or success of such a trip, but in over 25 years of float fishing, I've found that the 11 described below are among the most common. Learn to avoid them and you should be well on your way toward experiencing one of the greatest types of fishing Pennsylvania has to offer, for every species from muskies to bluegills on famous rivers like the Susquehanna, Delaware and Juniata, as well as on dozens of smaller flowages that etch a veinlike pattern across the Keystone State.

1. Choosing poor fishing water. Thousands of miles of rivers and streams await float fishermen in every part of Pennsylvania. Some are excellent for fishing. Others are just mediocre. Even a specific river may be particularly good in one stretch, just fair in another.

To make the most of your fishing time, do advance research now, to find out which are the best streams and rivers near your home and the premier stretches for float fishing on them. Inquire with sporting goods stores, local outdoor writers and river canoe outfitters.

Once you have a few rivers and sections in mind, try them out. But don't get stuck in a rut even if you find a productive piece of water. Part of the pleasure of this fishing is exploring new stretches and discovering good spots on your own. In general, it pays to avoid areas directly above dams, because cover is often sparse and you will likely have to paddle a lot and then portage around the dam. Also avoid sections with long, shallow stretches of water. The best fishing usually occurs where lots of riffles and minor rapids break the flow between deep pools, providing food, oxygen and holding water for the fish.

2. Floating a dangerous section. This is a sure way to ruin a float trip. Even if you don't capsize trying to shoot difficult rapids, you may worry about the possibility so much that it puts a damper on the whole trip. Plenty of good fishing can be found on safe stretches with just riffles and modest rapids to negotiate.

Always talk to someone who knows the float you plan to take before embarking,

if possible. Find out about any whitewater stretches and when portaging is required. When in doubt, err on the side of caution and walk the boat around the difficult water.

Lowhead dams are another danger. Know their locations. These may not always be marked on topo maps and can sneak up on you if you don't pay attention. Pennsylvania has over 2,000 lowhead dams on its rivers and streams. Each year they claim lives from people being washed over them and killed or sucked under in

ing to steer clear of unseen rocks and blowdowns. Not fun.

Choosing too long of a section to float is not only tiring and potentially dangerous, it can also hinder your fishing success. You may think covering more water will let you catch more fish, but actually you'll hurt your luck by being forced to rush through the water, throwing out quick, haphazard casts as you go because you're worried about being late and not getting through the drift in time. Once you re-

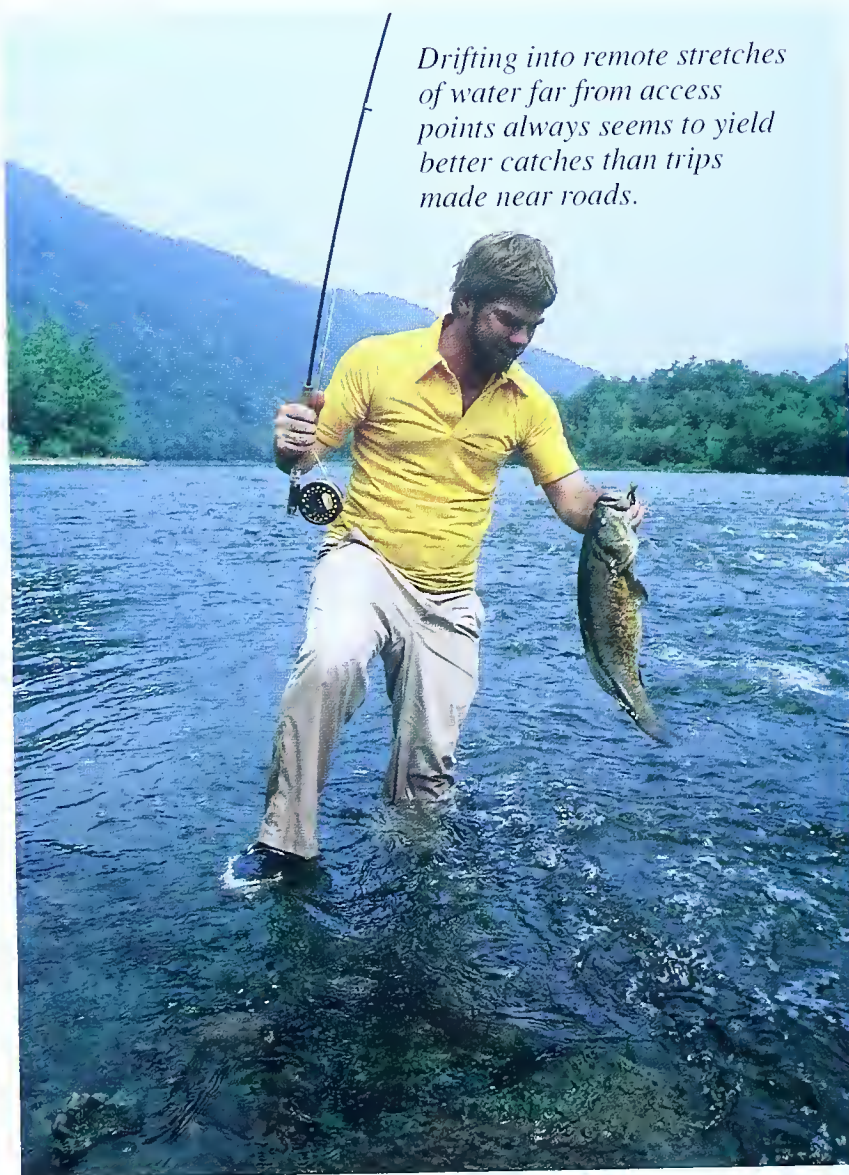
alize you are indeed late, things get even worse. There's no fishing then—just frantic paddling.

The distance to choose for your trip will vary with the speed of the river and how productive the fishing water is. Some streams have a good pool only every quarter-mile or so with lots of shallows in between. Others can hold fish just about anywhere along their entire length. Obviously, you need a longer float on the former than the latter. Speed of the river current is also important. Some rivers whisk you along fast and demand longer floats. Others meander slowly, requiring shorter distances.

As a general rule, plan on one mile of river per hour of fishing if you want to cover the water thoroughly. If the river is swift and you want to probe it lightly as you drift, 1 1/2 miles can be covered in an hour. But always err on the side of shortness, particularly for your first drift down new water.

To effectively gauge how long of a stretch to float, always buy a topographic map that accurately shows all the loops and turns a river makes—things road maps don't always portray. These also highlight landmarks and geographic features along the way that can help you chart your course and arrive at the take-out point exactly when you want to.

4. Not packing emergency gear. You may never need it, but having emergency gear on all float trips is a smart move. Bring a complete change of clothes packed in a waterproof bag, plus matches or butane lighter, flashlight, extra water and enough



Drifting into remote stretches of water far from access points always seems to yield better catches than trips made near roads.

the hydraulic backwash below. Inquire about this possibility when planning a float, and avoid these stretches or be aware of their location and plan to get out a safe distance upstream and portage around them.

3. Biting off too much river. This is a mistake I've learned from personal experience—more than once. Time and again I've picked too long of a stretch of river for the allotted time and wound up paddling furiously to get to the take-out point before nightfall. Sometimes even that effort didn't succeed, and I've wound up drifting downstream in darkness try-



food for an unplanned night on the river. A compact space blanket is a good idea, too, as is a first-aid kit, extra paddle and boat repair kit. This can be duct tape or some thin pieces of tin and “liquid metal” adhesives that you can use to patch a hole if you ram into a sharp rock.

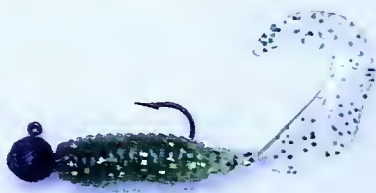
5. Choosing the wrong boat. Actually there is no “right” boat for float fishing, but some are definitely wrong. A thin dimestore plastic raft that punctures the first time it scrapes a rock is wrong. A bass boat or heavy V-bottom is also inappropriate.

The best bets for float fishing for most people are john boats and canoes. Canoes should be chosen only if you’ve had some practice in them. Pick a 16- to 18-foot model. These are excellent for paddling through long, slow stretches of unproductive water and for negotiating narrow chutes and tricky rapids. They are not the most stable craft, however, and you should know how to handle your weight distribution and movements before using one on a long float.

John boats are simple, humble boats. Many anglers prefer them because they



Weed-guard bullet-head jig



Plastic-tailed jig



Small crankbait

offer stability and allow you to move around a bit more than you can in a canoe. You can use either oars or paddles to propel them. They aren’t particularly easy to maneuver in riffles and rapids, though.

McKenzie-style drift boats are a third excellent choice for float fishing. They

are stable, comfortable to fish from and maneuver extremely well in white water. They are a bit heavy and usually require trailering, however. They’re also expensive.

Rubber rafts are a final choice. These are fine—if they are quality-made and use heavy enough material so that they don’t puncture every time you scrape a sharp rock.

6. Not paying attention to boat handling. I have to force myself sometimes on this one. It’s easy to get so absorbed in the fishing that you neglect the oars or paddles. That could mean you bang into rocks or drift into shoreline branches and get cobwebs all over your face. Or it could lead to more serious accidents.

Always be sure one person is in charge of handling the boat. Sometimes two people may have to contribute when negotiating rapids, but at least one person should always be keeping the boat on a straight course, positioned in the river where the best fishing is and out of the way of protruding rocks. If you see that you can’t avoid a rock, tell your partner so he isn’t jarred and potentially knocked out of the boat. Better yet, ask him to pick

How to Avoid 11 Common Float Fishing Mistakes

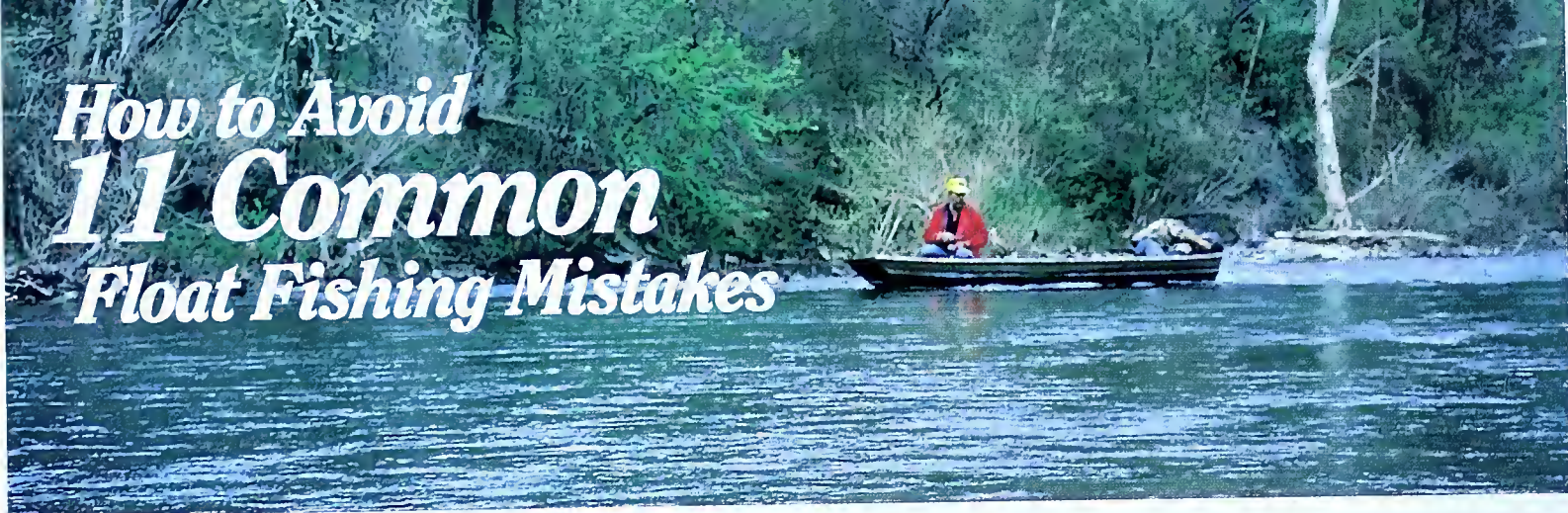


photo-Gerald Abney

up a paddle before that happens and make sure you avoid it. Besides the discomfort involved, hitting rocks also scares fish.

7. Missing the prime fishing hours. This may not be a problem on the best stretches of rivers in Pennsylvania, where smallmouths, trout, walleyes, and panfish may bite all day long. But often in marginal water or on an off day, you may find by the time you drop your take-out vehicle off, unload the boat and gear and shove off, you've missed the early morning feed. Then when you pull into the take-out point in late afternoon, you'll be leaving the river before the final flurry of feeding at dusk.

There are two solutions to this problem. One is to get up earlier so you're sure to be pushing off right at dawn for the morning feed and time the trip so you finish right at dusk (not easy.) The other is to camp. This is the best way I know to be on the river for these prime fishing periods. I took my largest river smallmouth ever—5 3/4 pounds—by setting up camp, eating dinner and then going out to fish right before dusk. There's no way I would have been on the river that late if I'd faced a long drive home that evening.

By camping you hit the evening feed and are right on the water the next morning for the dawn action when topwater lures and flies often work well. Make sure camping is legal where you plan to spend the night, and be sure to remove every scrap of litter—yours or other people's—when you shove off in the morning. Camping adds a whole new element of adventure to a float fishing trip and also provides a tactical advantage for catching those big fish that feed so often at dawn and dusk.

8. Not stopping enough. This is a common mistake even among experienced fishermen. After all, it's called "float" fishing, isn't it?

Casting as the boat drifts downstream is the major way you'll catch fish on a float, it's true. But this should not be your only approach. Often you'll fool some of the best fish of the trip by stopping and probing

prime areas more thoroughly. You can either anchor out and fish from the boat or pull the craft to shore or on an island and wade fish. I've caught up to 25 smallmouths from a single pool by stopping and probing it meticulously this way. If you simply cast as you drifted through that spot, you would have landed only three or four fish.

Don't stop just anywhere, though. Be discriminating and pause only where you see all the right habitat to make a prime fishing spot, or where you know from past experience that an area demands extra attention.

9. Not bringing the proper fishing gear. I've learned this the hard way. Once I just packed two spinning outfits and barely a mile into the float we found a bed of huge spawning bluegills in a backwater. My partner's sponge-rubber spider flies were the only offerings they would take. Ever since then I always pack both spin and fly tackle, plus a variety of lures and flies on float trips. You can't run back to the car if you leave something behind.

Fancy or expensive gear is not required. A lightweight spin rod of 5 1/2 to 6 1/2 feet with a reel spooled with 4- to 8-pound line will do for most lure and bait angling. For fly fishing use an 8- to 9-foot rod with a reel taking a 5- to 7-weight, weight-forward floating line and leader of 7 to 10 feet, tapering to a 4- to 8-pound tippet.

Bring an assortment of lures such as small crankbaits, spinnerbaits, plastic grubs, spinners, thin-minnow plugs, spoons and soft-plastic jerkbaits. For flies, stock a selection of sponge-rubber spiders, poppers, streamers and buggy-looking nymphs. If trout are present, bring a selection of terrestrials, plus the common mayflies and caddises for that river. If you really want to be prepared you can add hooks, splitshot and a natural bait or two such as minnows, hellgrammites or crayfish. I've rarely found the need for bait on floats, however. Once you get away from the road the fish are

usually quite willing to strike lures or flies.

10. Hitting poor water conditions. If you live a long distance from the water you plan to float, it can be quite frustrating to pack all your gear, plan the trip and arrive only to find high, muddy water. The way to avoid this is to line up a local source. It can be someone who lives on the river, a tackle shop nearby or a canoe livery. A call to this source to check whether local rains have raised and muddied the water can save lots of wasted time and disappointment. Rarely is fishing good under those circumstances and you can save a lot of trouble with an advance call.

11. Not searching for a pattern. Float fishing has the tactical advantage of allowing you to cover lots of water. But that advantage is wasted if you don't diligently search for a pattern. Use a variety of lures and flies in the early stages of the trip to try to determine which types and retrieves are generating the most action.

Also be sure to cast to different types of habitat. The deep mid-sections of pools may pay off one day. The next day riffles, rapids, eddies, tails of pools or shaded areas near the bank may be the payoff zone. By probing all of these water types with a variety of lures, you can usually key in on one pattern of lure or fly and a specific retrieve, water depth and stream location that is most productive. Each person in the boat should try a different offering in various parts of the river to more quickly discover this pattern. Then you can all switch to that most effective combination for the remainder of the trip.

And never bring just one of any lure, because that's surely the one fish will start biting with abandon. Then you'll have to fight your partner over who gets to use it.

There are other pitfalls that can decrease the enjoyment of float fishing, but by avoiding these 11 mistakes you can at least be ahead of the game on some of the problems that can reduce the success of this exciting type of angling.

ANGLER

The Orange Fish Hawk

by Chauncy K. Lively photos by the author

For many years fly fishers have argued about the rationale of wet fly fishing. Do trout take wet flies for drowned insects, or perhaps for caddises or mayflies that lay their eggs below the surface? Or could they be mistaken for subsurface, emerging mayflies, or maybe nymphs? There is ample justification for any of these explanations, but until trout can speak for themselves I'm fairly certain we'll never know for sure.

The mere fact that they fit so many categories makes them versatile tools for the fly fisher's bag of tricks.

The Orange Fish Hawk (OFH) is a wingless wet fly that has been around for a long time and has earned a following of loyal advocates. At first glance its orange body gives it a gaudy appearance—in the same category as some of the colorful, old-time brook trout wets, like the Parmachene Belle and Scarlet Ibis. But when it is soaked the body takes on a reddish-brown color (particularly if it is dressed with silk floss), which matches numerous mayfly nymphs.

Like many veteran patterns, the OFH has acquired so many optional dressings that it is difficult to ascertain which is the original. Some use fur instead of floss for the body and others use tinsel for a tag only, omitting the body ribbing. But these are only minor variations with minimal influence on the pattern's effectiveness.

The pattern uses a single cream badger hackle, sparsely wound. Typically, soft hackles are recommended for most wet flies because they ensure quick entry through the surface film. In addition, it is believed their flaccid barbules respond



to moving water in a way that suggests a living creature. However, there are times when a stiff-hackled OFH will earn its keep, too. I learned—quite accidentally—that when such a dressing is retrieved just below the surface, the more rigid hackle creates a slight hump in the film and a distortion of light resembling that of surface-emerging nymphs.

To prevent the fly from floating like a collar-hackled dry fly, after the hackle is



wound it should be angled back toward the bend while winding the thread firmly against the base of the barbules. The swept-back angle need be only slight; in fact, the wound hackle should resemble a shallow cone with its vertex at the hook's shank. I like to have a few stiff-hackled OFHs on hand as well

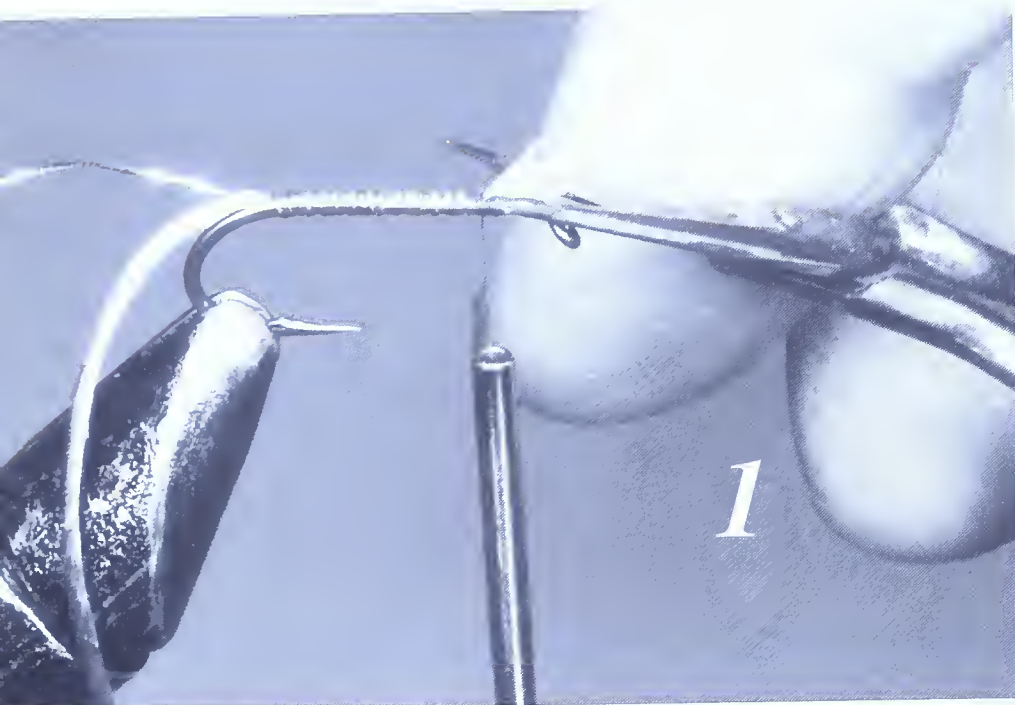
as those with soft hackles.

The Orange Fish Hawk responds well to all styles of wet fly fishing. When cast upstream and across, it will follow the currents as it drifts downstream until the slack in the line and leader are gone and it begins to rise to the surface. The drift may be extended by mending the line as it floats by, and stripping more line if a longer drift is required. Use a strike indicator if you wish. I personally like the freedom of an unencumbered leader.

Casting across-stream and allowing the fly to drift downstream in an arc is also effective,

and possibly the best way to work along shoreline logs or other cover. There are also situations where trout hold in small pockets—behind a boulder or where the current flows through a small opening in a brushpile or logjam, for example. These are circumstances where a free-drifting fly will generally not stay in the hotspot long enough to draw attention. I like to position myself upstream and pay out line until the fly hangs in the target site. Although the fly may appear stationary here, the current will generally give it a subtle side-to-side movement that trout often find hard to resist.

If you think these tactics smack of nymph fishing, you are correct. Actually, there is little difference between pure wet fly fishing and nymph fishing. Call it what you will, the soundest approach is to keep the fly in the water. That means keeping false casts to a minimum and moving slowly along to cover the water thoroughly. Seemingly unattractive water should never be overlooked unless it is isolated. One of my best trout came to the Orange Fish Hawk from a shallow margin of the stream where I'd never before seen a trout of any size. You never know.

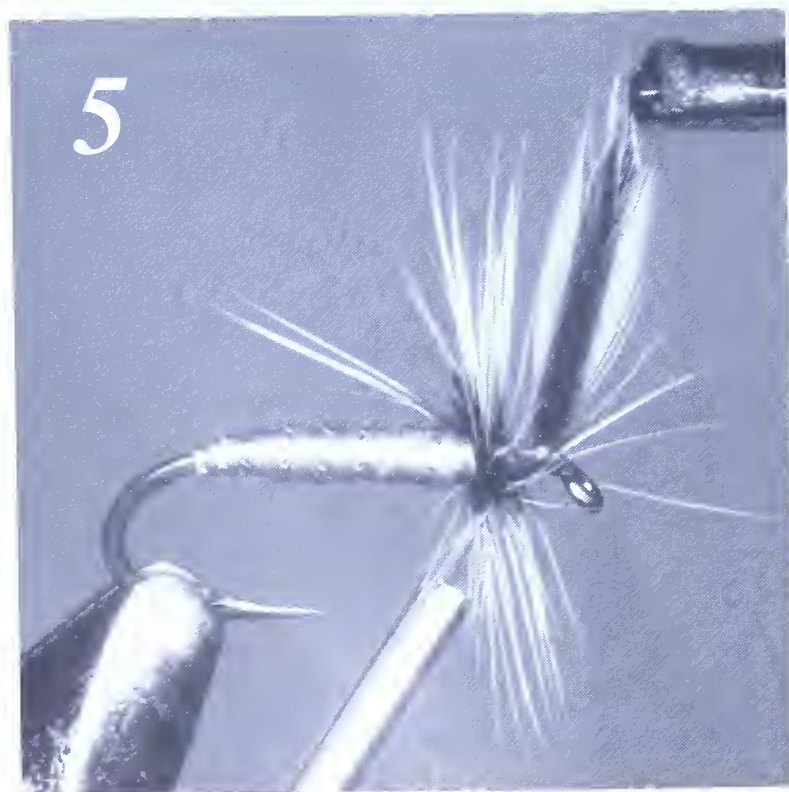
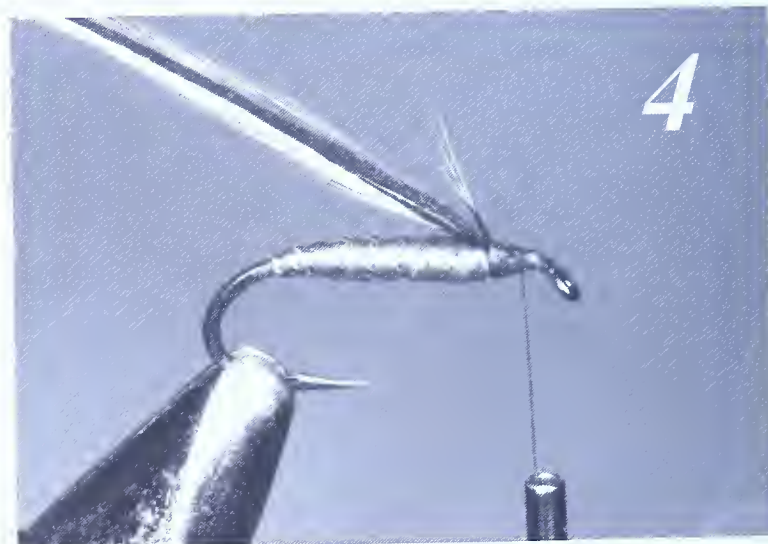
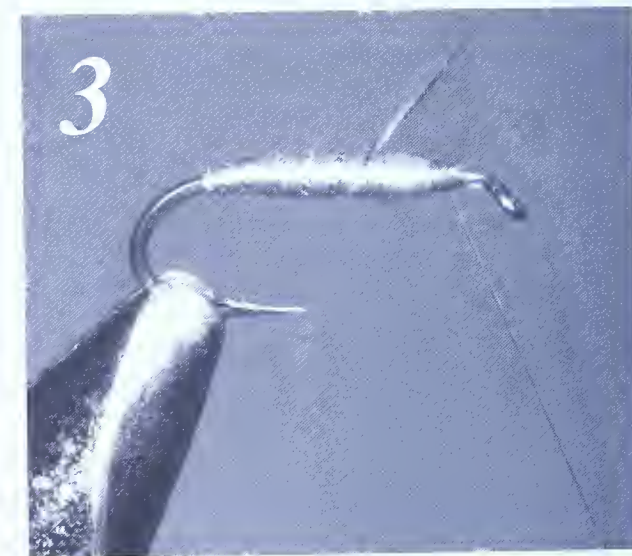
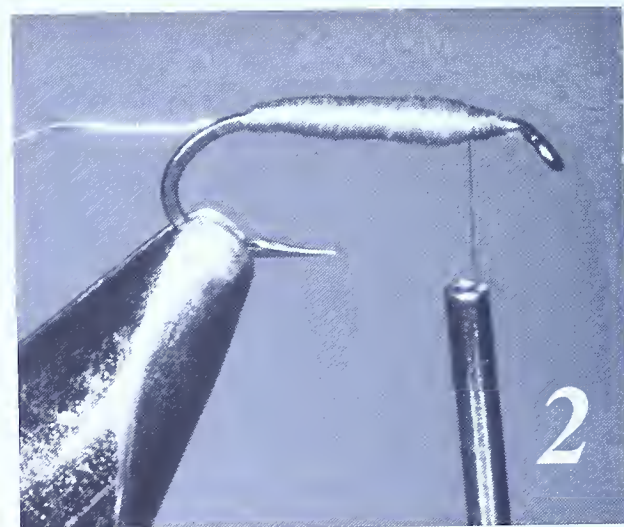


1. Tie in the thread 1/8-inch behind the eye and wind in spaced turns back to the bend. Then wind forward to the original tie-in. Tie in one 8-inch length each of floss and tinsel behind the eye and wind over both to the bend. Wind the thread back to the tie-in. Trim excess materials at the eye.

2. Wind the floss in layered turns to form a tapered body. Tie off in front and trim the excess.

3. Wind the tinsel in spaced turns and tie off behind the eye. Trim the excess.

4. Select a cream badger hackle with barbs as long as the span between the eye and the hook's point. Tie in the hackle as shown and trim the excess stem.



5. Wind the hackle three turns, tie off and trim the excess. With the left hand hold back the hackle while winding the thread several firm turns against its base. Finally, whip-finish the thread and apply head lacquer.

Dressing: Orange Fish Hawk

Hook: Sizes 10 to 16, Mustad 7957B or equivalent.

Thread: Brown 6/0 prewaxed.

Ribbing: Fine gold tinsel.

Body: Orange floss (preferably silk).

Hackle: Cream badger.



On the Water

with **Charles F. Waterman**

The Dimple Fishers

There are braids of current, gliding pools, swift runs and foamy eddies, all of which have their places in fly fishing texts. The veteran sees through them to imaginary fish, and some real ones.

The true bubble and dimple angler may be expert at all of these parts of a trout stream, but he or she has a special field of operation, ignored by most casters, which requires the concentration of a heron and a form of delicacy irritating to jumpy souls like me.

This kind of fishing happens along the edges, often where there are grass sweepers, but sometimes where there is nothing except a line where the creek ends and dry ground begins. It may be a rocky ledge, a pebbly edge or a sod bank, parts of which may have fallen in. There's hardly any current, but generally a little. I think it can be a rather boring area to watch.

Can you expect a rise to hatching flies?

"Naw," my wife says. "They're just eating little stuff, maybe nymphs or things that have fallen in from the bank. And they don't want to chase anything much."

The flies the dimple watchers use are generally very small and probably nameless. The tippet is very light. They change flies frequently and the things either stay in the surface film or sink very slowly.

"Even if you can't tie flies, you can get some little hooks and make some of these things," my wife says. The hooks are likely to be size 20-something.

I have watched several of these operators in action. Actually, "action" is a poor choice of words when most of the process is silent watching. They don't cast a great deal and if they do it right you may not see where the fly alights.

The false casting is generally done a little to one side to hide a flashing leader. The purpose usually isn't to gain distance but simply to make sure the fly thing will fall silently. Those fish aren't watching for a descending canary. They are taking things that just happen to be within easy reach.

"There he is—just a couple of feet left of that tuft," my wife says. "Man, he's a biggie!"

I do not comment for I am not sure I actually saw anything move. Or was there a minuscule shifting of the surface because of a gentle movement below it? Then a few seconds later there is a dimple that actually leaves a bubble.

"He put out a little air," my wife says. She is changing flies.

At this point literary protocol dictates that I should describe the heavy brown or rainbow trout that my wife hooks and tell of the resultant fight—but she doesn't always catch a bubbler, and I don't think others of her cult are universally successful, either. If she doesn't succeed she continues wading so slowly that her progress is hardly noticeable and a nearby bluejay watches her with suspicion.

The approach would appear to be ideal for six-inchers, but in my experience the fish tend to be bigger than those living in swifter water. Perhaps it is the larger fish that most often seek spots where there is no exertion required. I do know the same

fish may be in the same shoreline spot day after day and will return to it after having been caught and released.

Strangest of all the edge operations is the business of fish continuing to stick to the shoreline when there is a busy hatch in much faster water. I have seen those shoreline residents continue to take "little stuff" when there are continual rises in the main stream. The true triumph of the dimple angler comes when no one seems able to catch constantly rising fish in the main cur-



rents and the dimplers and bubblers continue to collect tiny things.

A very small terrestrial—spider, beetle, jassid or whatever, is always a good gamble for shoreline loafers—and like the more shapeless little fuzzy flies, it doesn't have to match anything in particular.

It's rather sneaky business and perhaps boring to those who feel all good casts should require a double-haul and a whistling line. It isn't really true but I tell my dimple-watching friends that they have begun to walk with a continual stoop and have learned to speak so softly that they are ignored or misunderstood. I have accused them of wearing clothing to match the bushes and boulders of the shores behind them.

"Look at that," my wife says. "He turned clear out away from the bank and almost stuck his tail up."

I didn't see anything so I kept quiet.

ANGLER

Maps Useful to Pennsylvania Anglers

The Pennsylvania Fish and Boat Commission does not sell these maps. For ordering and other information, contact the company or agency directly.

County Maps

Type 3, or the larger multi-colored **Type 10 County General Highway Maps**, show all public roads including state, township and forest roads. Lakes, rivers and streams in the counties are also shown. Contact PA Department of Transportation, Publications Sales Store, P.O. Box 2028, Harrisburg, PA 17105. Telephone 717-787-6746.

Pennsylvania: County Maps and Recreational Guide provides a handy guide book for the traveler and sportsman. The easy-to-use reference guide contains maps of each county showing roads, parks and wilderness areas. Available from: County Maps, Puetz Place, Lyndon Station, WI 53944. Telephone 608-666-3331.

Five-color, full-topographic county and county region maps are also available from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

Topographic Maps

Topographic maps are published and sold by the U.S. Geological Survey. An **index** showing the topographic maps for each quadrant of the state is free. The index includes the area covered by each quadrangle map, its name, scale and year of survey. Addresses of local map dealers and federal map distribution centers are also provided. Contact: Map Distribution Center, U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225. Telephone 303-236-7477.

In Washington, D.C., over-the-counter sales (no mail orders) are available from: U.S. Geological Survey, Main Interior Building, 1849 NW "E" Street. Hours 8:00 a.m. to 4:00 p.m. Telephone 202-208-4047.

The Pennsylvania Atlas and Gazetteer is a comprehensive guide with topographic maps that list roads, mountains with elevation contours, forest areas, marshes, waterways, boat ramps and dams. Contact: DeLorme Mapping Co., P.O. Box 298, Freeport, ME 04032. Telephone 207-865-4171.

Waterproof **Rough Country Topos** are available for all field-use scale topographic quadrangle map areas in Pennsylvania. Raised relief maps and regional topographic maps can also be purchased from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

The U.S. Forest Service publishes a map of the **Allegheny National Forest**, detailing all the forest service roads, as well as the locations of the region's trout waters. The map costs \$3.00 plus tax. Contact: U.S. Forest Service, 222 Liberty Street, Warren, PA 16365, or call 814-723-5150.

Lake Structure (Hydrographic) Maps

These maps show "structure" (depths, bottom contours, dropoffs, etc.) and are available for several lakes.

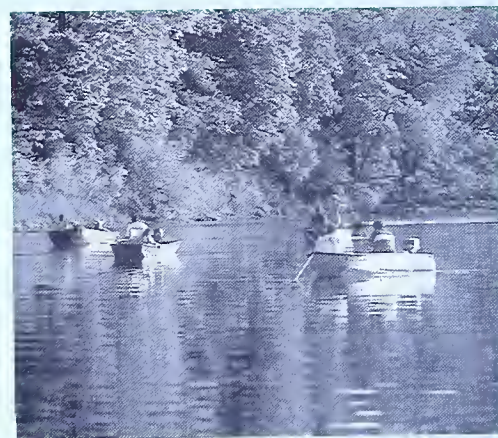
International Map Co., 547 Shaler Boulevard, Ridgefield, NJ 07657. Telephone 201-943-6566 or 943-5550.

Northwoods Publications, Inc., 430 N. Front Street, Wormleysburg, PA 17043. Telephone 717-761-1400.

Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

River, Stream Maps

The Delaware River and Outdoor Recreation. Series of 10 maps of the Delaware River. Waterproof maps showing physical characteristics and recreational facilities of the river from Hancock, NY to Trenton, NJ. Contact: Delaware River Basin Commission, Box 7360, West Trenton, NJ 08628. Telephone 609-883-9500.



Delaware River north of Stroudsburg

Howard William Higbee's Stream Map of PA (includes a free location guide). Shows 45,000 miles of Pennsylvania waterways, including the locations of 900 trout streams and 300 lakes, dams, reservoirs and ponds. Identifies "Class A" limestone streams, bass waters and trophy fish waters. Contact: Vivid Publishing Co., 347 Rural Avenue, Williamsport, PA 17701. Telephone 717-322-1167.

Schuylkill River Users Guide. Series of eight waterproof maps. Identifies public access sites, stream flow characteristics and dams and pools, from Port Clinton to Fairmount Dam. Obtain from the State Book Store, 1825 Stanley Drive, Harrisburg, PA 17103. Telephone 717-787-5109.

Susquehanna Water Trails. Detailed canoeing map of the Susquehanna River through the Endless Mountains of northeast Pennsylvania. The map shows towns, highways, access areas, camping areas and major islands. Endless Mountains Tourist Bureau, RR 6, Box 132A, Tunkhannock, PA 18657-9232. Telephone 717-836-5431 or 1-800-769-8999.

Navigation/Nautical Charts

Allegheny, Monongahela and Ohio Rivers Navigation Charts are available for the Allegheny River (mile 0-72), Monongahela River (mile 0-128.7) and Ohio River (mile 0-127.2). Contact: U.S. Army Corps of Engineers, 1000 Liberty Avenue, Pittsburgh, PA 15222. Telephone 412-644-6872.

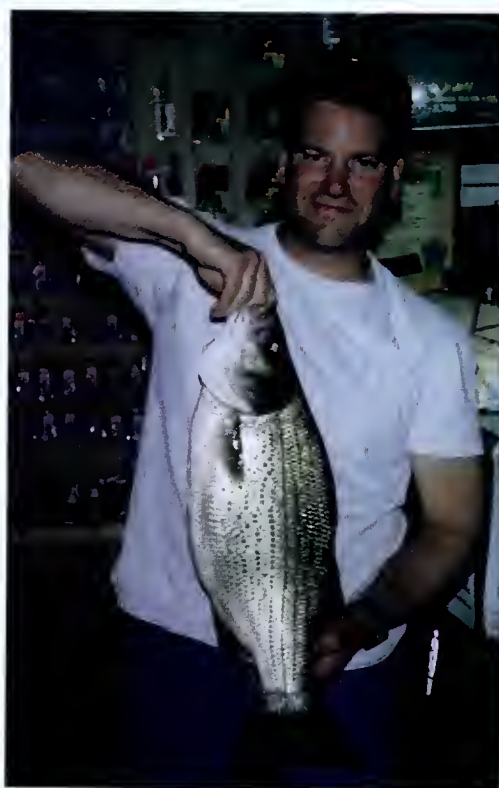
Nautical Charts of Lake Erie and the Delaware River are available from Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone 301-436-6990. Lake Erie charts are in Nautical Chart Catalog 4; Delaware River charts, Catalog 1.



Cast and Caught



Linda Decker, Centre Hall, and her granddaughters Shannon and Megan show off Shannon's catch from her first fishing trip. Shannon also caught a 15-inch largemouth bass on the trip, but released it because the season was not open. Nevertheless, Piebald the cat seems quite content with what she brought home.



Chalfont resident Wayne Miracle used a minnow imitation to convince this striped bass to strike. The fish, caught out of Nockamixon Lake, weighed 11 pounds, 1 ounce and measured 24 1/2 inches in length.



Clarks Summit resident Robert Jud shows off the rainbow trout he hooked while fishing the West Branch of Meshoppen Creek, Wyoming County. The fish, caught on a worm, weighed 5 pounds, 6 ounces and was 24 inches long.



Mechanicsburg resident Mark Bachleda was fishing at a state gamelands pond last October when he caught this 22-inch largemouth bass. The 6 1/4-pound fish was released unharmed after a quick photo. Nice going, Mark!



Narvon resident Michael Bird was fishing the East Branch of Brandywine Creek, Chester County, when he hooked this brown trout. The fish was caught on the opening day of the 1994 season. Weight and length are unknown.



Sam Mamula posed for a quick photo before releasing this smallmouth bass he caught while fishing in Connoquenessing Creek last September. The fish measured 20 inches long and weighed 4 1/2 pounds. Nice job, Sam!



Branches of the Juniata

by Mike Bleech



Little Juniata River



Green drake

"Do I look intense enough?" Harry asked as I peered at him through my camera viewfinder. "You have to be. Sometimes you have to get right down there to see the fly on the water."

He was fishing a rig called Charlie's Bicycle, a dry fly with a nymph of the same species tied on a dropper off the bend of dry fly hook. After catching his first adult trout of the morning, his intensity increased. He became 10 years younger, crouching like a great cat stalking its prey. His feet no longer slipped on the rocks. His back casts were crisper, and the entire leader straightened before the fly hit the water.

It wasn't a great morning of fishing on the Little Juniata, a few recently stocked fingerlings and one richly colored 14-inch brown trout that we admired before Harry let it slip through his fingers. But it was a great morning to be on the river with Harry, which is more of what trout fishing is about than landing trout.

The main branches of the Juniata River—the Little Juniata, the Frankstown Branch, and the Raystown Branch—meander between the beautiful Appalachian ridges of Huntingdon, Blair and Bedford counties, providing many opportunities for special moments, and for superb fishing. In their headwaters native brook trout thrive. Farther downstream where they become the major branches of the Juniata, they harbor trophy brown trout, acrobatic smallmouth bass, prolific fallfish, and even walleyes and largemouth bass.

Once severely polluted by industrial, agricultural and municipal sources, the Little Juniata and Frankstown Branch are a couple of shining examples of stream clean-up that has occurred during the past few decades. Water that once ran almost black with filth now supports a rich food chain.

Little Juniata

"The best trout fishing is from Tyrone down, the most consistent, the best hatches," says Allan Bright, who operates a fly fishing shop and guide service at Spruce Creek. "It's a very consistent stream. There is good fishing throughout. I don't think it really matters where you fish it."

That is almost 20 miles of superb trout water. Though supported by fingerling trout stocking only, 80,000 each fall, based on the number and size of the trout, it rates as one of the premier trout streams in Pennsylvania, and for that matter, in the entire Mid-Atlantic region. Most of the trout are browns. The only rainbows below Tyrone move in from Spruce Creek. Native brook trout can be found in just the headwaters.

"It's a sweet stream to wade," Bright says. "It doesn't have that big rock sub-structure. It tends to have a really flat bottom."

Temperature is one of its best characteristics. Good shade and numerous cool spring tributaries maintain healthy temperature through summer. While not considered a limestone stream, numerous limestone tributaries give the Little Juniata charac-

teristics similar to limestone streams. Most notable is the abundant aquatic insect community.

"The hatches are extremely prolific. The only one I know like it is Penns Creek," Bright says. "The river has an incredible food source. Trout grow fast."

One of the clients guided through Bright's service, a gentleman from San Francisco, caught a 30-inch brown trout on a fly. Bright estimated its weight at about 9 1/2 pounds. Like all of the trout caught by his clients, it was released.

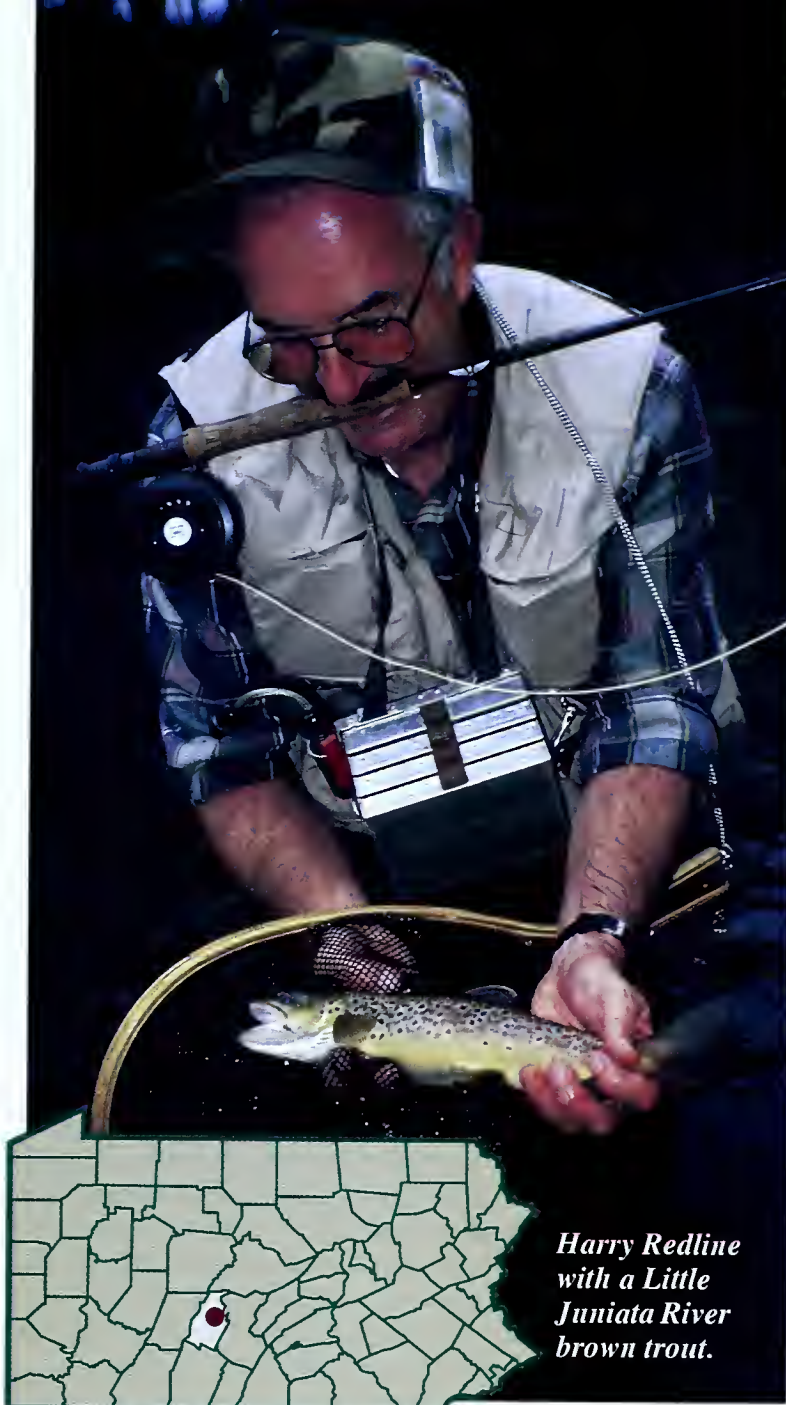
Bright's biggest Little Juniata trout on dry flies have been in the 21- to 22-inch class. Browns are common to 16 inches. But anglers note the general absence of trout between that size and the 21- to 22-inch class.

When I asked about his favorite hatch, Bright immediately replied "Sulphurs!" This hatch goes on for a couple of weeks sometime between the second week of May and early June.

"It's a beautiful time of the year," he says. "You can very easily have sulphurs, green drakes and cahills at the same time. And then you throw on top of that several kinds of caddises at the same time. They're all very prolific."

Known as the "gorge," a remote 3-mile stretch between Spruce Creek and Barree removes anglers from civilization. This area flowing through Rothrock State Forest had a reputation for big trout until fishing pressure increased during the past few years. However, fishing is still excellent. Pack a lunch and spend a day there.

Trout fishing on the Little Juniata can be good anytime the weather is suitable. Which time offers the best fishing depends on which kind of fish-



Live bait, like this hellgrammite, produces more consistent smallmouth bass action in the Frankstown Branch than other offerings. The smallies aren't big there, but they are abundant.

ing you prefer. Spinners and spoons can get plenty of attention during spring. Dry flies are at their best during May and June. Terrestrials can be excellent through summer. During fall, discounting the recently stocked fingerlings you might catch, the average size of the trout is generally better than during spring and summer. Winter is a time for solitude, and a good chance for big browns.

"I've had some spectacular midge fishing during February," Bright says.

Currently the Little Juniata from the mouth of Bald Eagle Creek, near Tyrone, downstream to its confluence with the Frankstown Branch is under the following special regulations. Trout fishing is allowed year-round. The daily limit is eight trout from the opening day of the regular trout season until Labor Day. From the day following Labor Day to the next opening day it is three trout.

Frankstown Branch

Only the upper end from the mouth of Pine Run to Brooks Mills is stocked trout water.

"It's just bonus from there down," says my long-time fishing pal Harry Redline, who grew up along the Frankstown Branch. For several years he asked me not write about the Frankstown

Branches of the Juniata



Little Juniata River

Branch because its big brown trout were a closely guarded secret among a lucky group of anglers. He was the only reason I knew about this wonderful creek, so I kept the secret. But now the truth about it is getting around.

It is not supported by fingerling stocking, yet the Frankstown Branch supports a thriving population of brown trout, along with a few rainbows. Smallmouth bass are abundant, though not particularly large for the most part. This water is absolutely loaded with big fallfish. They are a treat for anglers like me, who do not catch these cooperative fish in our local waters. They're great sport on ultralight tackle, but they can get to be a nuisance when trout are the objective.

Like most larger creeks in Pennsylvania, bottom-land development has altered its nature.

"I remember one time when I was about 14," Redline recalls, "I was on the Frankstown Branch fishing for smallmouths, and an old-timer came down the creek pitching spoons. When he got to me he asked, 'What happened to all of the pickerel that were in here?'"

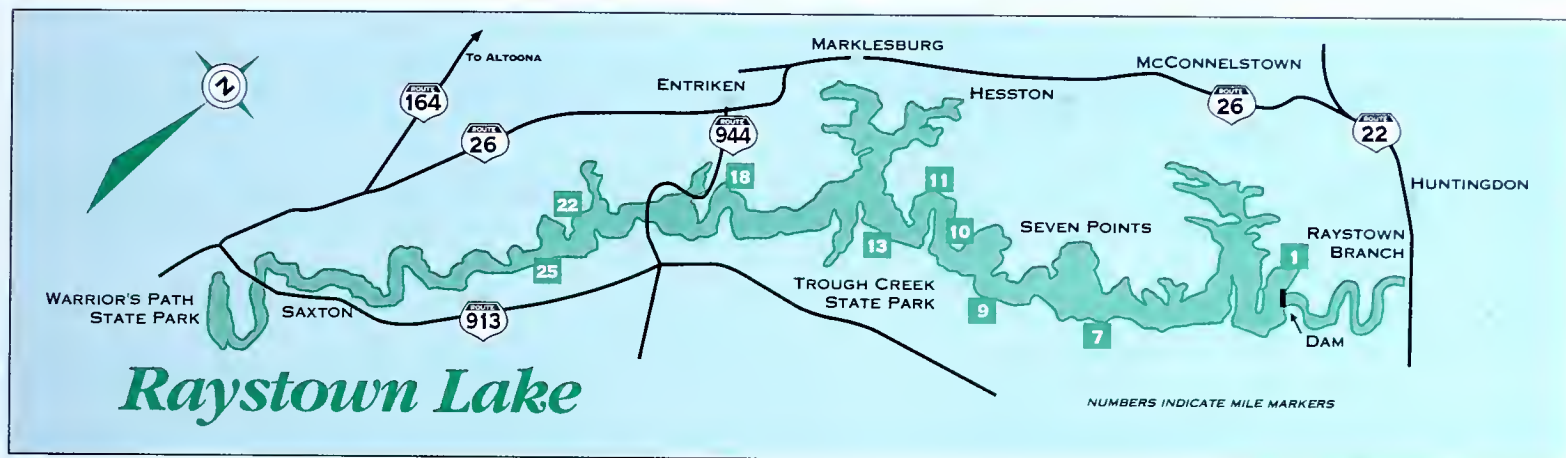
Drainage and channeling for agriculture destroyed their habitat. However, that may have improved it as trout habitat. There have always been native brook trout in the headwaters, and some remain there. Farther downstream, notably below Williamsburg, browns and smallmouths dominate. They have survived there through some periods when the water quality was poor. During the 1950s the creek was sometimes nearly black with runoff from pulp mills, farms and municipal sewage.

The Frankstown Branch benefits from several cool limestone springs, which give it characteristics similar to the Little Juniata. Its rock-and-gravel bottom is home to a rich forage base of aquatic insects. A very brief sampling of the bottom using a fine-mesh net revealed numerous nymphs—hellgrammites, stone flies, mayflies and caddis flies.

Downstream from the cool tributaries is a key location for trout anglers, since the Frankstown Branch



photo-Mike Bleech, map graphic-Ted Walke



warms a few degrees more during summer than the Little Juniata. It also tends to get cloudy quicker.

"A friend I fish this creek with goes to Montana every year to fish," Redline says. "One day we were standing in a riff catching big browns, and I asked him if he caught bigger browns in Montana. 'Never!' he said. We've called that riff 'Montana Riff' ever since."

Few creeks offer anglers a better opportunity to catch 20-inch trout. Fly fishing is one way to go about it, but if that is not your brand of sport, you might try bait fishing, particularly in some of the deeper pools. A nightcrawler, minnow or crayfish drifted through one of these pools can put a serious bend in your rod. Your best odds for a big brown are generally between dusk and dawn.

Look for smallmouth bass in the rockier parts of the pools. You will not likely catch many that are longer than 14 inches, but they are plentiful and superb sport on ultralight tackle. They launch themselves skyward and then turn their sides into the current and strip the drag. Every now and then a 4-pounder may give you a jolt.

During fall, smallmouths retreat to the deeper pools. This may be the best time to catch the larger bass in the creek.

The usual array of smaller lures catches smallmouths—leadhead jigs, spoons, spinners and crankbaits. Live bait produces more consistent action. You should be able to catch enough hellgrammites for a day of fishing using a seine. For larger bass, try minnows.

One of the better ways to access this creek is along a "Rails to Trails" project dedicated in 1994 between Alexandria and Williamsburg. Scenery along the way makes a visit here a treasure. The thick bottomland undergrowth is framed overhead by a high canopy of sycamores, oaks, silver maples and willows. On the sides are steep mountains and limestone cliffs. You can see remnants of the old Pennsylvania canal system in this area, including what remains of two old locks, a lock tender's house and two quarries. This great system of canals was intended to provide commercial transportation links throughout the state. However, even before it was completed it was rendered obsolete by railroads.

The juncture of the Frankstown Branch and the Little Juniata is the upper end of a small reservoir impounded by a dam at Warrior Ridge. Smallmouth bass, largemouth bass and crappies inhabit this small lake, but access is difficult. The local volunteer fire company sells seasonal passes to a boat launch site.

Raystown Branch

Even though the state record brown trout was caught here, the lower Raystown Branch is not in the same class of trout

water as the Little Juniata or the Frankstown Branch. Nor are the smallmouth bass as abundant as in the Frankstown Branch. Still, during summer you can have fun with the combination of trout, smallmouths and sunfish during a scenic float trip.

What a different place this is from summer to winter! The short stretch of the Raystown Branch from Raystown Dam to the Juniata River bustles with activity during summer. Canoeists, swimmers and anglers play under the sun. During winter the only folks who remain are the most dedicated anglers.

The most interesting thing this creek has to offer anglers occurs during winter, when walleyes move in. Look for walleyes in the calmer, deeper pockets. Live minnows, or leadhead jigs, or minnows on jigs are standard terminal rigs for this kind of fishing. Little would most summertime visitors imagine that 10-pound walleyes are caught here during the cold months.

Special regulations apply to the Raystown Branch from Raystown Dam to the Juniata River. Trout fishing is allowed year-round. The creel limit is 8 trout per day during the regular trout season, 3 per day from the day after Labor Day until the opening of the regular season. The minimum size is 7 inches.

Primarily smallmouth bass and brown trout water, the main branches of the Juniata River offer an exciting variety of fishing to central Pennsylvania anglers. For local information, contact: Raystown Country Visitors Bureau, 241 Mifflin Street, Huntingdon, PA 16652; or phone 1-800-269-4684.



Little Juniata River Fly Hatches

March: Black midge, gray midge, black stone fly.

April-May: Blue quill, blue dun, grannom caddis, black caddis, green caddis.

May-June: Blue quill, blue dun, sulphur, March brown, gray fox, green drake, blue-winged olive, ginger quill, light cahill, green caddis, yellow crane fly.

June-July: Yellow drake, blue-winged olive, blue dun, sulphur, slate drake, cream cahill, tan caddis, cream caddis.

July-August: Trico, little white mayfly, cream caddis.

August-September: Trico, little white mayfly, white mayfly, slate drake, winged ant, gray caddis.

September-October: Slate drake, blue-winged olive, white mayfly, blue dun.

October: Blue-winged olive, blue dun, slate drake, bronze crane fly, tan caddis.—MB.

Flies, FlutterSpoons and Darts: Upriver Shad Fishing

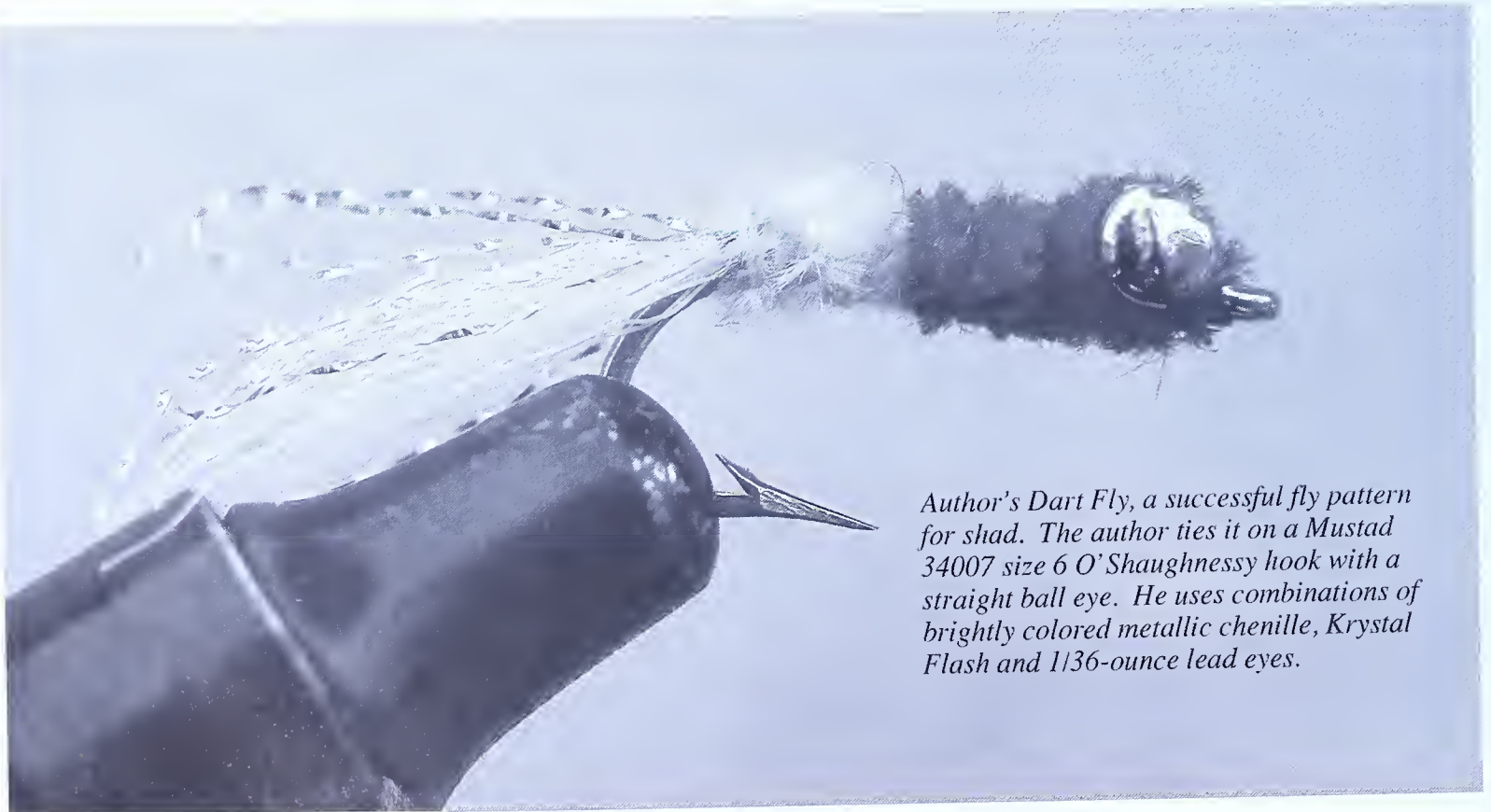
by Vic Attardo

The 1995 shad season on the Delaware River will not be remembered as a typical shad year—if there really is such a thing. The season started out full of promise with fish turning on in the middle of March around the warm water discharge of the Portland power plant. In the first week of April, shad were caught right on schedule below Lambertville and all signs began to point to a wonderful season. But then something went wrong.

About the time fishing should have gotten hot, in the last week of April and the first week of May, it instead turned ice-cold. The spring rains failed to materialize, and coupled with a lack of snowfall during the winter, the river remained low and the water stayed chilly. At times shad became as difficult to catch as muskies, and there were even rumblings that the lack of fish was caused by excessive off-shore trawling.

Truth be told, I had a rotten shad season right through mid-May and I know I was not alone. The lack of shad scales littering the shoreline and a dearth of boat traffic on the river told the story. My fishing partners and I were catching a few fish, but we were generally disappointed. Most of the river rats went home about the third week of May.

But then something else happened. Just as we started hunting for smallmouths and striped bass on the lower river, we began to see large schools of migrating shad. It was the end of May and the run should have been over below Easton, but for another three weeks there



Author's Dart Fly, a successful fly pattern for shad. The author ties it on a Mustad 34007 size 6 O'Shaughnessy hook with a straight ball eye. He uses combinations of brightly colored metallic chenille, Krystal Flash and 1/36-ounce lead eyes.

was a steady stream of fresh pods of fish. The river had enjoyed some rain by now and had warmed up, but the lower half was not up to the level we generally like, so we jumped into our cars and trucks and headed up the line. We drove past Easton, past Martin's Creek, past the Smithfield Access and the Delaware Water Gap until we came to the part of the river that shares

know how to use a fly rod to catch these fish and fewer have tried. Though their numbers are growing, fly rod specialists are in the minority when it comes to shad fishing and this is a shame. For a fly rod definitely has its time and place on the river, and if you think that a shad puts up a fight on a spinning or conventional outfit, you best hold onto your crushed felt hat

On a good day in the lower part of the river you can count on a nearly continual movement—a pod of fish followed by a gap of varying length, followed by another pod of fish—this does not occur with the same regularity in the northern waters.

For this reason, sight-fishing plays a more important role in upriver shad fishing, particularly when the rush of migration is over. Through all that fishing I've been so ebullient about, most of it occurred as we spotted a school of fish from the road, parked, and then fished directly to the school.

Another trick we employed was confined to the midday hours when shad limit their movements. Driving along the river we would look for large boulders somewhere in a quiet-looking stretch and then fish to the boulders. Individual shad often take up temporary resting spots behind these river breaks, and they don't like to see a fly or lure come into the backwash where they're hiding.

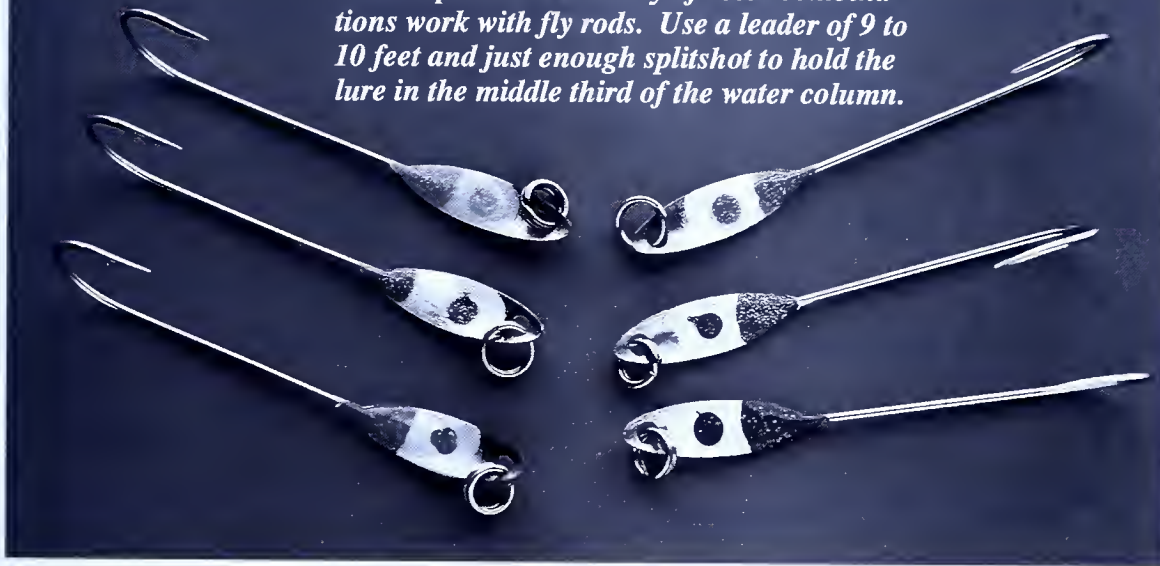
We'd make a few casts to these locations, and if a shad did not respond, we moved on.

The upper river is blessed with a number of shallow riffles, flat pools and extensive tailouts. We had our best action in the pools between the riffles and tailouts. The shad gathered in these areas to perform the spawning ritual and from the river banks they were easy to spot as their submarine wakes disturbed the flat surface. During the spawning dance shad cruised near the surface and then swam with an increasing speed and frenzy until these tell-tale wakes disappeared somewhere in the pool.

Sight-fishing

An angler who hopes to be successful in the sight-fishing game should learn what this activity looks like and be able to distinguish it from the wake of a strong breeze or the slower stroke of carp. At times I was able to discern a school's pattern as the fish started from the tail, then made their way up one side of the shoreline,

Flutterspoons in a variety of color combinations work with fly rods. Use a leader of 9 to 10 feet and just enough splitshot to hold the lure in the middle third of the water column.



its waters with the state of New York.

And there we started to catch shad. Dozens and dozens of shad. What's more, we didn't need downriggers, and for the most part, we didn't use spinning gear. In the shallower waters of the shared state river we caught our shad with fly rods and flies, and flutterspoons on fly rods. And even though we may have had a difficult time controlling some of these big fish, we knew a shad year had been saved. This was late-season shad fishing and it was hot. Well, in actual afternoon temperatures it was warm, but the fishing was hot and we felt a lot better than if we had to be wearing tons of sweaters, insulated waders and long johns.

By now, few eastern Pennsylvania anglers need an introduction to the American shad. They know that each spring this hard-fighting fish migrates up the Delaware on its annual spawning run. They know it can be caught in a variety of ways using everything from small spinners and shad darts to downriggers and the latest rage, the flutterspoon. But few anglers

when you hook one with a fly rod—for a 6-pound roe puts a curve in your rod and into your back the likes of which you might not imagine.

On the upper Delaware, from the Gap north, there is ample opportunity to catch shad in water where there is room to make a back cast. And the irony is that while fishermen below Easton may think the run is done, this shad fishing is just getting started.

What's different about it?

Almost from the time that shad reach the upper river they are in the mood to spawn. In most years, water temperatures have reached the low 60s when the fish move above Lackawaxen. Migrating fish are still moving through, but many other fish have found suitable spawning locations and are staying put.

The upper river is so wide, and in many places lacks the deep water channels of the lower river, that anglers must adjust their games to catch upriver fish. As the shad reach the Pennsylvania/New York waters their schools seem more dispersed.

On the upper Delaware, from the Gap north, there is ample opportunity to catch shad in water where there is room to make a back cast. And the irony is that while fishermen below Easton may think the run is done, this shad fishing is just getting started.

Flies, FlutterSpoons and Darts: Upriver Shad Fishing

turning at the upper limit of the pool, and then cruising back down the other side of the river to the tail. This happened frequently but not constantly. In any case, I got into the habit of positioning myself somewhere in the mid-section of the pool where I often had a longer crack at the fish than if I stayed in the tail or near the riffle. In addition, the mid-pool area was where my flies and spoons behaved in a more tantalizing manner.

At times it was terribly frustrating to watch a school of fish swim by at such a pace to present any more than a single cast in their direction. But I learned to be patient and stay put. Eventually the fish would move into my sector and stay there for sometime—if I had chosen a place on the right path. Now that sounds a little religious, but the fact is, shad share a group instinct. If one shad takes a specific route along the river, you can bet that other shad have taken the same route and that others will follow.

Suppose you observe a school of shad in their spawning dance move around a couple of mid-river rocks. The trick is to get into casting range of that area and prepare for the school to make a return visit to the rocks or for another pod to come along and do the same thing.

In this case of the hypothetical rocks, I sometimes felt that if I positioned myself too close to the target, my presence in waist-deep water created a new disturbance in the flow that the spawning shad would sense and shun for a time. To those who doubt that a shad won't take immediate advantage of a new break in the current, think back to the times when you have released a shad only to find it nosing your legs for a few minutes as it caught its breath. They are indeed creatures of habit, but they are also quick to take advantage of fresh circumstances—consider the success of the shad ladder in Easton.

Presentation

Besides selecting a sound location from which to approach spawning shad, the next most important aspect is your presentation. For thousands of trout and small-mouth anglers the technique is nothing

new—it's called the down-and-across technique. By positioning yourself above the target, you cast either directly across or slightly above and downstream, depending on the current. Once the cast is completed, maintain control of the line and follow the fly with your rod tip. If necessary mend your line and the fly flows downstream to allow it to sink deeper. When your fly tightens up to the length of the line, it will arc back across the current.

Many strikes occur during the arc, but don't begin an immediate retrieve when the arc is complete. Instead, allow your fly to hold in the current directly below you, particularly if you're in a nice lie. Strikes often occur while the fly is holding steady.

Another trick is to raise and lower the rod while the fly is holding in the current. When you raise the rod the fly will come toward you and then fall back as you lower the rod. Just make sure you maintain control of the line while you do this or you may miss a strike you never knew you had.

Breaking some rules

Early on I said we caught shad with fly rods and flutterpoons. That wasn't a misprint. Instead of a fly on the end of a fly line, a small flutterspoon was attached to the tippet. Some fly rodders might consider the use of a metal lure on the end of the fly line heresy, or they'll say that a spoon would be impossible to cast with a fly rod. Well, a flutterspoon is actually lighter than many lead-eyed flies that are popular today, and the spoon is a dynamite attractor on the upriver shad.

Using the spoon, I did not attempt to make long casts. Instead I positioned myself in, or close to, a shad route. I would simply fling the spoon out, allow it to make the downstream arc, and then hold the spoon in the current below me, raising and lowering the rod as described above. I'd let the spoon do its thing until a shad intercepted it or until I became bored and made another short cast. I would also sweep the rod, maneuvering the spoon back and forth across the current in front of an evasive school.

For flutterpoons I prefer a hammered nickel blade measuring 1/4-inch to 5/8-inch across at the widest part. Many catalogs sell willowleaf blades in sizes 0 through 7 with a lower number representing a smaller blade. But not all size 0 blades are created equal. Some are narrower than others. Look for blades that are the widest you can find, measuring 3/4-inch in length. Simply put, the wider

blades flutter more appealingly than the narrower blades.

On a fly rod, I fish a flutterspoon with a leader between nine and 10 feet long. Depending on the speed of the current, it may be necessary to add a few splitshot above the spoon. However, do not overload your offering. You don't want the spoon lying on the bottom. Instead, adjust the weight so that the spoon works the middle one-third of the water column.

At best a flutterspoon and splitshot are awkward to cast with a fly rod. But long casts are not necessary when you position yourself properly in a spawning area. Flip the spoon into the current and allow the current to take the spoon downstream. If the current is not strong enough to grab the spoon, then you probably don't need splitshot on the leader. Simply cast the spoon as if it were a heavily weighted fly by using a more open loop.

Fly fishermen, including me, always want to know which fly pattern is working. We are obsessed with patterns. But in shad fishing, patterns are perhaps the least important aspect in the game. I have gone back into the fly fishing history books and studied the evolution of shad flies from when trout and feather-winged Atlantic salmon patterns were first adopted for shad use, to the making of snelled flies with glass bead heads and lately to the mimicking of the shad dart with chenille and other thick-body materials. Some tiers are now going to a great deal of trouble tying mylar-bodied wobble flies that resemble flutterpoons. There's no reason to doubt that they all catch fish because shad are not too particular. But in selecting a shad fly, I consider it more important to match the weight and design of the fly to the type of water I am fishing.

For instance, in those behind-the-boulder situations I described, I used a dumbbell-eyed metallic chenille fly that I knew had the weight to get down behind the rocky turbulence. In a swift run I used the same style fly, or a flutterspoon with a splitshot, if I wanted to swim the edges of the current. But in a few shallow tailouts I was glad to have a bright-chartreuse streamer with only a few turns of lead around its shank because the fly did not have to stay down.

The pattern I had the best success with in most situations was tied on a Mustad 34007 size 6 hook, an O'Shaughnessy style hook with a straight ball eye. It was made with bright-red thread and sported a thread tag and a few strands of red Krystal Flash. The lower two-thirds of the body was



Position yourself above the target and cast either directly across or slightly above and downstream, depending on the current. Once the cast is completed, maintain control of the line and follow the fly with your rod tip.



wrapped with metallic chenille. A head of fluorescent-orange chenille was wrapped over lead eyes weighing 1/36-ounce. The red thread completed the head. I changed colors by using flies with different chenille heads, such as chartreuse or bright red, but the rest of the pattern held true.

By the way, a salmon fishing acquaintance once suggested to me that shad fishermen should tie their patterns on the double-point hooks salmon anglers frequently use. While I've seen the double-point patterns in books I have never seen them used nor have I tried them myself. I'd like to know if they work.

Spinning rods

To those anglers without a fly rod, don't despair. Two fishermen in our upriver parties used all the same tactics with their spinning rods and had great success with flutterspoons and micro darts in these conditions. When they worked the deep channels around bridges, the spin fishermen went back to their 1/8-ounce darts and outscored the fly rodders who were even

using full sinking lines in those situations. This clearly was not a sight-fishing experience and a deep-water presentation was needed.

No one can predict what kind of season 1996 will be for shad. Maybe we'll be washed out for two or three weeks. Maybe the water levels and the temperature

will be low. Maybe the fishing will be hot when it's supposed to be hot. Who can tell? But whatever the circumstances, upriver fishing presents new opportunities for many anglers, as well as new challenges. And in the end, isn't that how we really like our fishing?

ANGLER



photo-B. Mark Sch

THE GREEN DRAKE

MYSTIQUE

BY CHARLES R. MECK



It happened over 30 years ago. Tom Taylor, Dick Mills, Lloyd Williams and I wanted to spend an entire leisurely, early June day on one of east-central Pennsylvania's finest limestone streams, Penns Creek. We made a day of fly fishing on the upper reaches near Spring Mills, but near evening we headed downstream below Coburn. What unfolded when we arrived at the section just below where Elk Creek enters amazed us. At every possible parking area along the stream we saw cars—dozens of cars. Everywhere we looked we saw anglers in groups of twos, threes, fours, and more standing and waiting near the shore. Other nearby anglers had already taken up positions in the stream as if they were waiting for the opening of the fishing season.

Finally, Dick Mills had enough and asked one of the anglers why there were so many fly fishers on the stream and what they were waiting for. The angler looked at Dick sort of dumbfounded and said, "It's shad fly time." The same angler, as if to verify his terse statement, walked to a nearby bush and shook it violently. Hundreds of large duns and spinners took flight prematurely. To these locals this was the long-awaited annual shad fly event—to me it was the spectacular green drake emergence.

What we were about to see the next few hours represented a bizarre, circus-like atmosphere instead of a fly fishing experience. The four of us hurriedly walked downstream trying desperately to locate a space on the stream large enough to accommodate all of us. Finally, a few hundred yards below the tunnel at Coburn, we found a riffle where we assembled our gear and waited—and

waited. Upstream from us I saw another half-dozen anglers also eagerly waiting.

About 8:30 p.m. it happened, and it happened all of a sudden—thousands of large mayfly duns appeared on the surface almost on cue. Duns struggled to rid themselves of their nymphal shucks and trout began feeding. Within minutes hundreds of duns dotted the surface in front of me. Within minutes the last rays of sunshine gave way to the first darkness of night. All four of us began casting to rising trout—trout feeding on struggling duns and emergers. Most of these trout, even in the half light, refused our presentations. After 10 casts over a riser, it might take the dry fly—then again, it might not.

We quit that marathon of fly fishing about 9:30 p.m. Green drake duns still struggled on the surface, a few trout still rose to them, and many of the anglers still cast their dry flies over the risers. I walked away from that first introduction to this mayfly madness frustrated, bewildered, but defiant and determined that I'd meet this hatch again on my terms at a later date.

Many anglers think that the only stream to match the green drake and its spinner, the coffin fly, is Penns Creek. That's not so. You can see from the chart on page 27 that many Pennsylvania streams hold this hatch—and on many of them it's much less frustrating to fish than the one on Penns Creek.

You'll find another great green drake hatch on central Pennsylvania's Little Juniata River. Since 1975 I've seen a few drakes in the air each night for a week usually around the end of May. Then it happened—in 1987 a fly fisher friend called me one evening to tell me about the great coffin fly spinner fall he

A Green Drake pattern with a trailing shuck.



To make a shuck, take a piece of pale tan nylon stocking and cut a section lengthwise. Pull on it to make it curl and place it through the point of the hook just under the tail of the pattern. Make certain that you've cut the "detachable shuck" about the length of the hook shank.



THE GREEN DRAKE MYSTIQUE

photo-B Mark Schmerling

had just experienced. From that moment until the present, the Little Juniata River has also boasted a spectacular green drake hatch. It, too, has many anglers who annually fish the hatch.

Since that introduction to the hatch many years ago on Penns Creek, I've fished green drake hatches on dozens of Commonwealth streams with many skilled anglers. Over these years I've come up with some important tactics to use if you want to be successful during the hatch.

Emergence characteristics

You can expect green drakes (*Ephemera guttulata*) to begin appearing the third week in May on some of the southern streams that hold the hatch. Hatches on northern streams and some of the colder limestone streams don't appear until the second week in June. A couple of days after the drake emerges it reappears over the water as the coffin fly spinner. The coffin fly has a white body and clear wings. Spinners usually mate high near the tops of trees near the shore and the females move over the stream to lay their eggs. Once these females have exuded their eggs, they die spent-winged on the surface. Trout often gorge themselves on these white spent spinners. A few weeks after the female deposits the fertilized eggs, the tannish colored green drake nymph hatches. It lives underwater for two years feeding and growing until it appears above the surface as the green drake dun.

If you plan your fishing trips carefully you can fish over green drake hatches for more than three weeks on Commonwealth streams. Hatches on Yellow Creek in Bedford County begin around May 18. You'll next find the hatch on Spruce Creek about May 23; the Little Juniata River, May 26; Penns Creek,

May 28; and Fishing Creek (Clinton County) and Honey Creek, around June 10. The hatch lasts about a week on most streams. On Penns and the Little Juniata the hatch begins downstream and works its way upstream a few miles each evening.

Pattern selection

One of the widest variables fishing any hatch is the type of pattern anglers use during the hatch. I've used patterns so lifelike they were almost impossible to tell from the natural, except for the hook. Many of them produced few trout. A pattern developed by George Harvey has probably produced more trout for me over the past 10 years than any other pattern I've used. I've changed a few of the ingredients of the pattern since I first used it, but much of it remains the same. It includes a wing of yellow calf tail, a body of dubbed light-yellow poly, a tail of dark brownish black moose mane; and badger hackle. I tie the pattern on a size 8 to 12 Mustad 94831 hook.

Size of these naturals varies tremendously from stream to stream. You need the size 8 to copy the duns on Penns Creek and the Little Juniata River, and a size 12 will copy those found on Kettle and many other northcentral streams.

If you fish the green drake hatch long enough you'll find dozens of patterns that anglers use to match the hatch. Just recently Russ Mowry, of Latrobe, developed a Green Drake parachute pattern. Russ uses a luminescent material for the body. Ron Dorula, of Uniontown, has used this pattern when a few drakes appeared on the Youghiogheny River and found it extremely productive.

Often you'll find that during a hatch, trout almost totally ignore your pattern. I still remember vividly the largest trout I ever

caught during a green drake hatch on Penns Creek. Trout rose all around my pattern at naturals, but seemed to refuse my dry fly. On one casting attempt I became so frustrated that I tugged the dry fly under the surface a few inches and a 21-inch brown trout sucked in the pattern.

On another occasion while fishing with Craig Hudson on the Sinnemahoning Creek near Emporium, we hit the peak of the green drake hatch. I began tugging the dry fly under the surface and trout responded by striking. I caught 10 trout that evening on a submerged Green Drake dry fly pattern.

If a submerged pattern doesn't work, try adding a shuck to the Green Drake. Take a piece of pale tan nylon stocking and cut a piece lengthwise. Pull on it to make it curl and place it through the point of the hook and just under the tail of the pattern. Make certain that you've cut the "detachable shuck" about the length of the shank of the hook.

One afternoon Jim Ravasio of Chicago, Illinois, and I fly fished the Little Juniata River while two spectacular hatches of sulphurs and green drakes appeared simultaneously. Jim fished over a half-dozen trout rising to a sulphur while I fished over a heavy riser to the green drake. Finally, in a fit of frustration after drifting a Green Drake over the fish for more than a half-hour, I added a detachable shuck. On the first cast over that trout with this new attachment it took the pattern. I landed and released a 17-inch brown trout that took the Green Drake with the added shuck.

Don't overlook the spinner fall. Often you see green drake duns emerging and coffin fly spinners on the surface at the same time. Carry plenty of Coffin Fly patterns when you plan to fish the hatch. I've found the best pattern to be one with a white foam body, deer hair tail and grizzly hackle to copy the spent wings. When all other patterns have failed me, this Coffin Fly catches trout.

The Green Drake Nymph works well when the duns begin emerging. I tie this with dark-ginger hackle tips for the tail and dub a tan body of angora.

Don't forget to take plenty of Sulphur patterns with you when you fish the green drake hatch. Why take Sulphur patterns? Often sulphur duns emerge with the green drakes. I don't know why, but I do know that trout often take the smaller sulphur dun and emerger and sometimes totally ignore the green drake dun. One day on the Little Juniata River I sat and watched trout feeding on the two species. For every trout I saw taking a green drake, I counted six taking a sulphur dun.

Where to find the green drake

For several years after I had first met the green drake on Penns Creek I assumed that stream held the only good hatch of that mayfly species. Nothing could be further from the truth. You'll find the green drake on more than 50 streams and rivers across the state. I've experienced tremendous hatches of this large mayfly on streams you can jump across. Yes, even many small mountain streams across the state hold good populations. On many streams where the drake emerges, it's the largest hatch of the season and it brings lunkers to the surface to feed. When it appears on many of these streams it's much less frustrating than on Penns Creek.

On many of the small streams I've listed, you'll find trout much more cooperative than on the more notable ones. No, you won't find the tremendous number of mayflies, but you will find trout rising and fewer fly fishers. You might even forever dispel that green drake mystique.

57 PENNSYLVANIA STREAMS WITH GREEN DRAKE HATCHES

1. Brush Creek (Somerset County)
2. Big Fill
3. Phoenix Run
4. Ninemile Run
5. Hammersley Run
6. Pine Creek
7. Kettle Creek
8. Big Fishing Creek
9. Elk Creek
10. Yellow Creek
11. Spruce Creek
12. North Fork, Red Bank
13. Little Mahoning Creek
14. Lehigh River (above Francis Walter Dam)
15. Honey Creek
16. Kishacoquillas Creek (West Branch)
17. Delaware River
18. Bear Creek (Elk County)
19. Driftwood Branch, Sinnemahoning Creek
20. First Fork Sinnemahoning Creek
21. East Fishing Creek
22. Lost Creek
23. Willow Creek
24. Loyalhanna Creek
25. Canoe Creek
26. Vanscoyoc Run
27. Little Sandy Creek
28. Caldwell Creek
29. Thompson Creek
30. White Deer Creek
31. Allegheny River
32. Oswayo Creek
33. Mill Creek (Potter County)
34. Huntington Creek (Luzerne and Columbia counties)
35. Spring Creek (Warren County)
36. Hayes Creek
37. Cove Creek
38. Little Juniata River (around Barree)
39. Cedar Run
40. Slate Run
41. Little Pine Creek
42. Cross Forks
43. Town Creek (Bedford County)
44. Oar Creek (Bedford County)
45. East Branch, Mahoning Creek
46. Big Mill Creek (Elk County)
47. Callen Run (Jefferson)
48. East Fork, Sinnemahoning Creek
49. Grays Run (Lycoming County)
50. West Branch, Pine Creek
51. Millstone Creek (Jefferson County)
52. Young Woman's Creek
53. Genesee Forks (Potter County)
54. Penns Creek
55. Youghiogheny River
56. Hemlock Creek
57. Meadow Run (Fayette County)

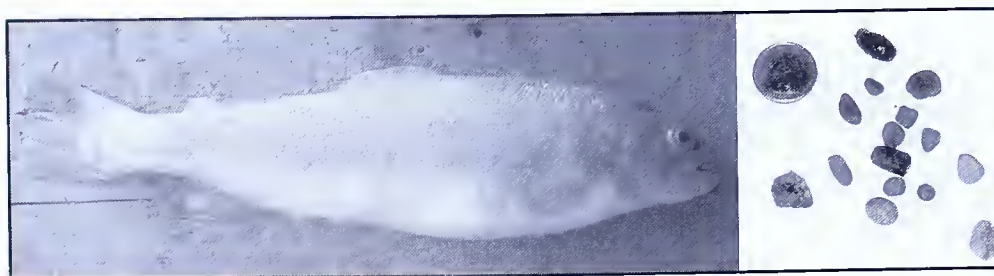


Commission President Gary Pflugfelder presents Governor Ridge with a "First of State Harveys Creek" print. Left to right are Commission Executive Director Peter A. Colangelo, Governor Ridge, Commission President Gary Pflugfelder and Sportsmen's Advisory Council Chairman Vernon Ross.



Commissioner Paul J. Mahon (left) explains Commission plans to Governor Ridge (center) for a new access for the disabled on Oxbow Lake. Oxbow Lake, 60 acres, is in Wyoming County. Also reviewing the plans is Representative Bruce Smith, Chairman of the House Fish & Game Committee.

My wife, Sandy, hooked this palomino trout while fly fishing in Little Muncy Creek, Lycoming County, the opening weekend of trout season. When she cleaned the fish, we found 14 stones and a hemlock cone in its stomach. It seems she did the poor fish a favor by harvesting it.—Ken Hess, Harrisburg.



Edward W. Manhart Receives Lifetime Achievement Award

Edward W. Manhart, Director of the Commission's Bureau of Law Enforcement, received the Pennsylvania Wildlife Federation's Lifetime Achievement Award. The award was presented during the Federation's annual Conservation Awards Banquet, last March.

Manhart began his Commission career in 1968 as a fish warden. He graduated with the Fourth Class from the H.R. Stackhouse School. He was elected class president and presented the address at graduation ceremonies. He served in Luzerne County until 1972, when he was promoted to Waterways Patrolman Supervisor II, serving at Commission headquarters in Harrisburg. He completed various law enforcement courses as Harrisburg Area Community College, and in 1981 he was made Chief of the Law Enforcement Division. In 1987, the Law Enforcement Division became a separate bureau, and he was named Bureau Director.

In 1979, Manhart initiated the deputy training school and upgraded the Waterways Conservation Officer training program. He was also instrumental in promoting new laws, including Pennsylvania's boating-under-the-influence law and the homicide-by-watercraft law. He also helped upgrade the Fish and Boat Code fine structure. In 1980, he helped recodify the Fish and Boat Code, resulting in Waterways Conservation Officers acquiring limited police powers.

Ed resides in York County with his wife, Sarah. They have four daughters, and have provided a home for more than 35 foster children.



Lisa Williams Leads Inter-Agency Non-Game Management Plan

Lisa Williams is currently filling a temporary position to develop a comprehensive, interagency non-game management plan. She is responsible for spearheading the development of this plan in cooperation with the Game Commission, Department of Conservation and Natural Resources (DCNR) and others interested in nongame conservation, recreation and education. One of the first things Lisa will be working on is coordinating a survey of the general public's nongame program interests and priorities for publicly targeted non-game recreation and education programs. Lisa will use the information gathered from this survey and other sources to develop the plan. These efforts are being supported through a grant from the Wild Resource Conservation Fund.

She is also responsible for transferring information pertinent to non-game management issues. One of the most pressing issues in non-game management today is funding. The national Teaming With Wildlife initiative represents a unique opportunity to expand the user fee concept so successfully implemented in the current federal aid grant programs. However, this initiative must first pass Congress, which necessitates strong public and business support. Lisa will coordinate the activities surrounding this important conservation initiative for Pennsylvania. Lisa's efforts are coordinated and supervised through the Fish and Boat Commission Executive Office.



Governor Ridge congratulates angler Timothy Strobel, who caught the new state record lake trout last season. Left to right are Commission Executive Director Peter A. Colangelo, Tim Strobel, Governor Ridge, and Commission President Gary Pflugfelder.

Lisa will soon be contacting businesses and environmental organizations across the Commonwealth to provide information on Teaming With Wildlife. Anyone interested in assisting her in this effort by approaching a business or organization to inform them about the initiative should contact her directly. Business understanding and support for this initiative is critical to its success. This initiative is important to the Commonwealth because it will enable us to bolster current non-game program efforts through a new funding stream of over \$13 million. This funding will be available for non-game conservation recreation and education programs of which the Fish and Boat Commission may benefit from up to \$6 million annually in additional non-game program funding.

Lisa comes to the Commission with a B.S. in Ecology and Environmental Studies from Juniata College and an M.S. in Wildlife and Fisheries Science from Penn State. She has spent the past year working with the Wildlife Extension Specialist in the Penn State School of Forest Resources on nuisance wildlife and wildlife damage control. She has worked seasonally since 1988 with the Nongame Unit of the Bureau of Wildlife Management at the Game Commission.

Houck Named "Officer of the Year"

Waterways Conservation Officer (WCO) Joseph K. Houck, currently serving in Lawrence County and a portion of Bulter County, has been named the Fish & Boat Commission "Officer of the Year" by Law Enforcement Bureau Director Edward W. Manhart. Houck received the honor at the 1996 Northeast Fish & Wildlife Conference, in Hartford, Connecticut.

Houck is a 29-year veteran of Commission service. He began his career in 1967 as a WCO, serving over the years in Lehigh, Fulton, Lawrence and Butler counties. Houck, a U.S. Navy veteran, is married and has three adult sons.

In making the award, Manhart mentioned Houck's enthusiasm for the job, and high level of professionalism in performing his duties. "Organizational skills such as planning and scheduling are some of WCO Houck's strong attributes," Manhart said. "WCO Houck understands the value of balancing law enforcement activities with public relations. More than 60 percent of Houck's time was coded to field activities, including fish law enforcement, boat law enforcement and education/information."

Manhart also said that WCO Houck is very conscientious and a true professional.

1995 Boat Registration Statistics

Total Active Registrations:
330,440
(+3 percent over 1994)

Total Unpowered Vessels: 37,631
(+13.5 percent over 1994))

Total Active PWC's: 15,392
(+27 percent over 1994)

Motorboats by class / Number of registrants

Class "A" vessels: 174,146
Class "1" vessels: 114,522
Class "2" vessels: 3,846
Class "3" vessels: 290

Registered Unpowered craft/ Number of registrants

Rowboats: 9,319
Sailboats: 1,755
Canoes: 16,574
Kayak/scull/sailboard: 9,983

Major Boating Counties / Number of registrants

Allegheny: 29,936
Bucks: 15,849
Luzerne: 12,513
York: 12,078
Montgomery: 11,272
Westmoreland: 10,991
Lancaster: 10,811
Erie: 10,440

Angler's Notebook *by Seth Cassell*

Whether you fish flies, lures or bait, if the fishing is slow, add a one-inch strip of aluminum foil to your line where it's tied to the hook or lure. This extra flash might help you stir up some action.

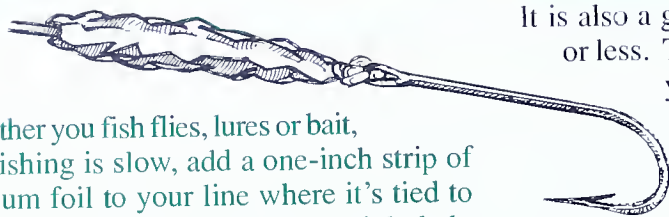
Flyfishermen shouldn't put much emphasis on being able to cast long distances. Most trout streams are not open enough to do this, and many times the result is a sloppy cast that spooks the fish. It is better to concentrate on casting accurately and gently. A short roll cast is often the best (and only) way to catch trout on some streams.

During May, many mayfly species emerge to provide flyfishermen with excellent dry fly fishing. It can be frustrating when trout refuse your fly, when you know you are using the correct imitation. If this happens, try switching to a different style of dry fly, such as a comparadun, thorax dun, parachute dun or a spinner. This could be the ticket to more strikes.

Many major rivers of the Commonwealth offer notable walleye fishing, especially in spring. Below dam spillways are definitely prolific walleye hangouts during this time. Other good places are at the mouths of tributary streams. Try bouncing a variety of jigs off the bottom.

Soon after opening day, trout streams will begin to clear and their water levels will begin to drop. This can make trout wary to the heavy tackle typically used in April. If you are venturing to a trout stream this month, you may want to consider down-sizing your tackle.

Use smaller lures, baits, splitshot and swivels. It is also a good idea to use 4-pound-test line or less. These adjustments should increase your late-spring success.



When fishing with artificial lures or flies, setting the hook can be a difficult task for anglers to master.

A good way to learn is by going to a farm pond and practicing on bluegills. These easily enticed panfish offer plenty of practice, and when you go for the larger gamefish, you won't miss as many strikes.

As many anglers will tell you, fishing can be great in the rain. Many tackle boxes, though, water when rained on. In addition to being a nuisance, a wet tackle box can cause lures and other tackle to rust. To prevent this, carry a small piece of plastic, or even a trash bag with you on your outings. If it rains, you can use it to keep your tackle box dry.

When flyfishing for trout on large creeks and rivers, a 6-weight fly line is ideal. These types of waterways are usually exposed to wind, and the added weight can help you direct your fly to the desired location. In the summer, a 7-weight or 8-weight rod and line combination can easily combine to make a good smallmouth bass setup.

For bait fishing on windy days or when the water is choppy, large golf ball-sized bobbers are appropriate. This allows the angler to readily detect a strike amid the ripples or waves. When the weather is calm, or when fishing a slow-moving pool, it may be better to use smaller bobbers. This helps lower the chance of spooking nervous fish.

illustration- Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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SMART

Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

Fish Nests

Just like birds, fish use or build nests. There are almost as many different kinds of nests as there are fish. Nests, no matter how different, serve the same purpose—to give eggs a safe place to incubate and hatch. Often the nest is where the hatched fry develop. Eggs are the most delicate life stages of fish, so the site and construction of the nest are critical. Each species has very specific requirements for spawning. The size of the particles on the bottom, current, and vegetation are examples of these requirements.

BEDS

Male sunfish fan out bowl-shaped nests in the bottom. The male hovers above the developing eggs, protecting them from predators. He also uses his fins to move the water around the eggs, keeping them clean and giving them oxygen. All the members of the Sunfish Family build these kinds of nests. Smallmouth and largemouth bass are members of this family.

REDDS

Trout and salmon build a nest called a *redd*. Redds are located in shallow riffles or runs, anywhere gravel and cobble-

sized rocks are found. The female picks a spot and using her tail, fans the bottom, clearing away silt, sand and small rocks. Often the male will lend a "tail" to this effort. Left behind is a small dent lined with rocks and lots of nooks and crannies for eggs. Once fertilized and in the redd, the female fans more gravel on top. Both parents then leave the eggs to develop and hatch.

STONE MOUNDS

Fallfish, chubs and other minnows build stone-mound nests. Fallfish nests appear as if someone dumped a small wheelbarrow of marble-sized rocks on the bottom. The fertilized eggs develop in the cracks between the stones. After the young fallfish hatch and leave the nest, other minnows may use that same nest.

CAVITY

Channel catfish and some bullheads use cavity nests. They like to have overhead cover. Such spots can be found in or under logs, undercut banks or rocks. They lay their sticky eggs there and both parents guard the eggs and the young fish.

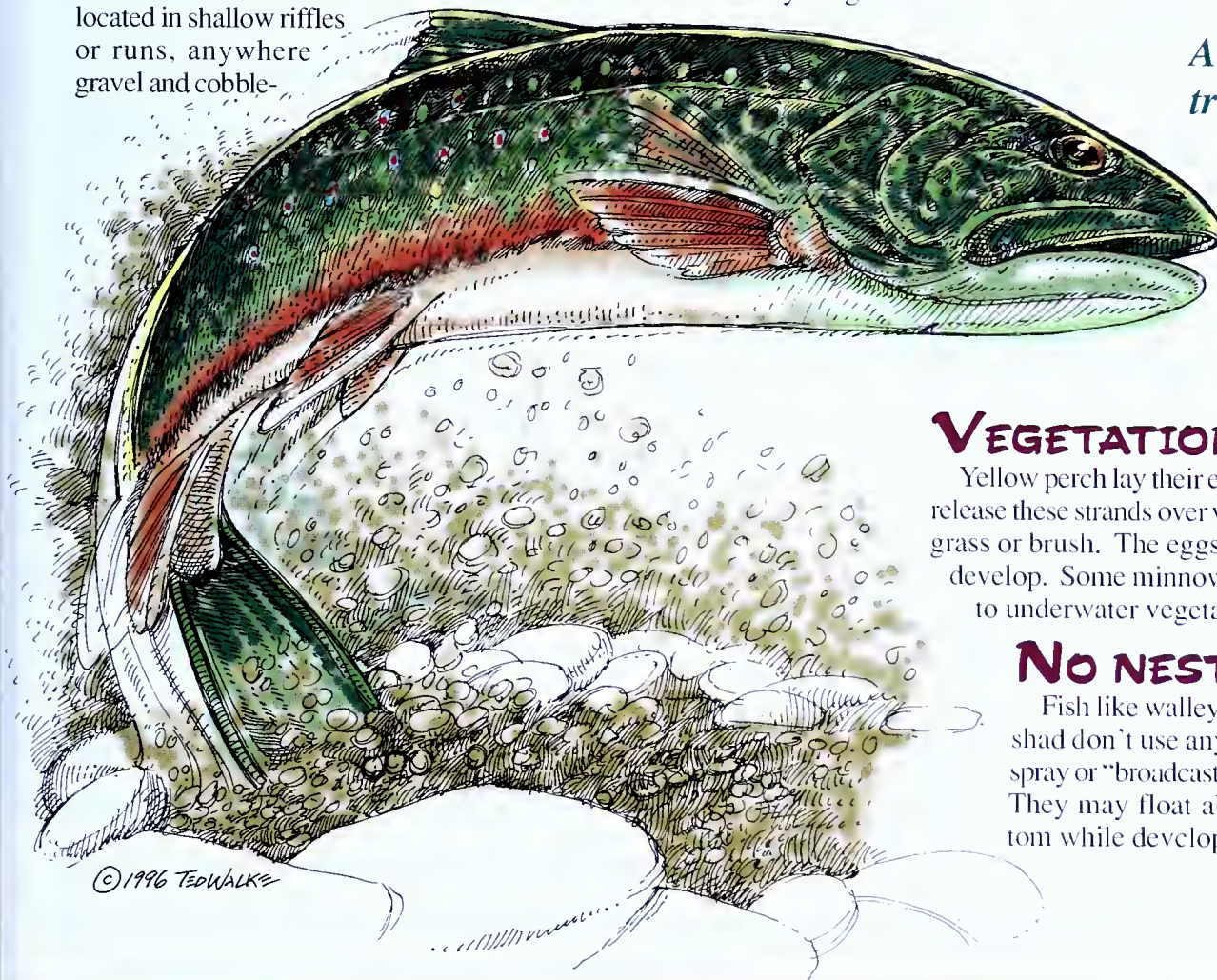
A female brook trout cuts her redd.

VEGETATION

Yellow perch lay their eggs in long strands. They release these strands over vegetation like submerged grass or brush. The eggs are fertilized and left to develop. Some minnows also lay eggs that stick to underwater vegetation.

NO NEST

Fish like walleyes, pike, striped bass and shad don't use any kind of nest. They just spray or "broadcast" their eggs into the water. They may float about or stick to the bottom while developing.



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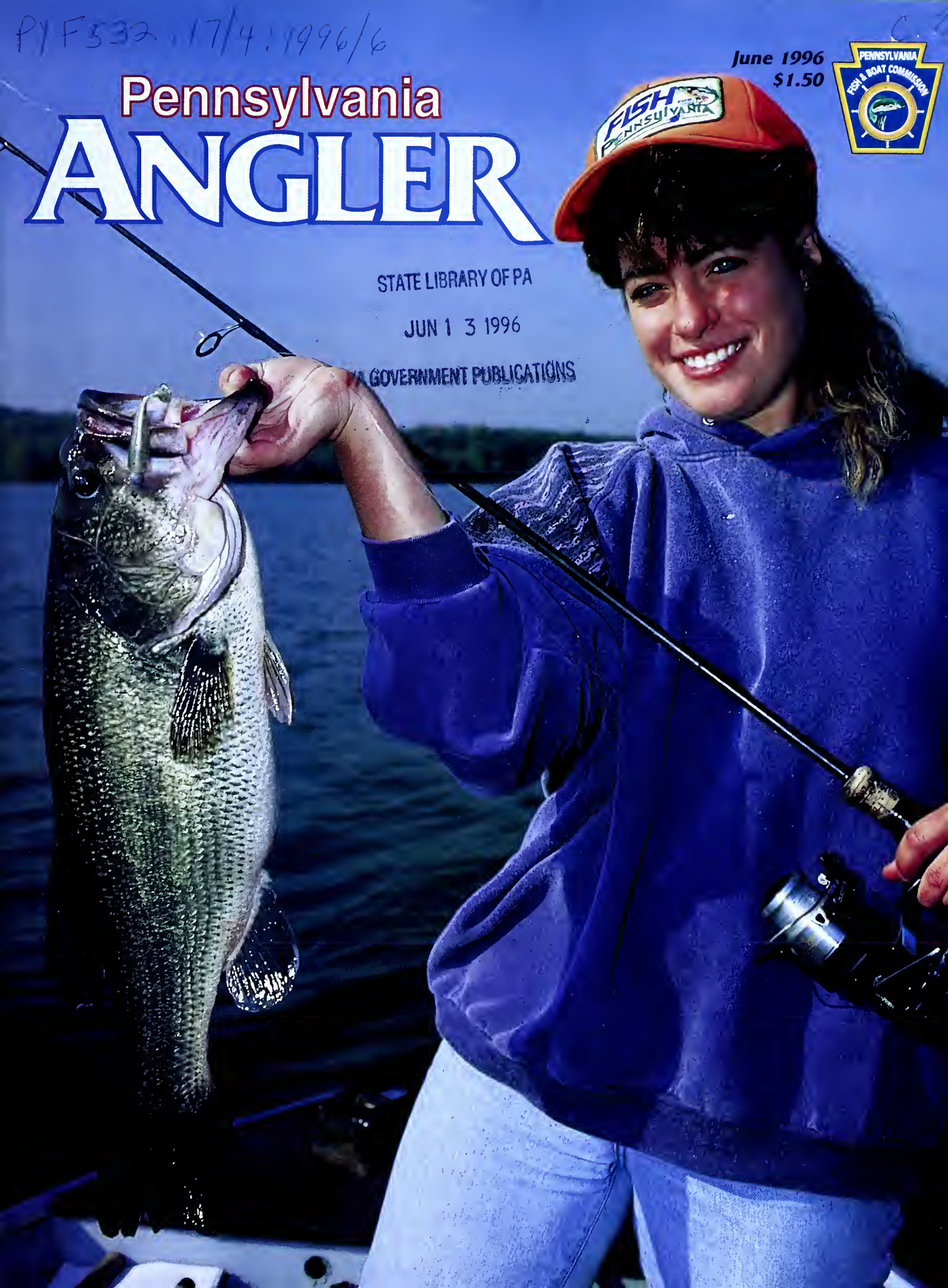


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GOVERNMENT PUBLICATIONS



Straight Talk

Keeping "Resource First" in the Federal Clean Water Act

The United States Congress is currently considering legislation to reauthorize the federal Clean Water Act. A controversial Clean Water Act reauthorization bill (HR 961) passed the House of Representatives last May. The United States Senate is currently reviewing this legislation and considering alternatives. As Congress considers changes to this key federal law, we need to ensure that they keep "Resource First" in their deliberations.

The federal Clean Water Act (also called the Federal Water Pollution Control Act) was passed by Congress in 1972. The goal of the Act was "to restore and maintain the chemical, physical and biological integrity of the nation's waters." The Act also set minimum standards to ensure that our waters can support "fishable or swimmable uses."

Pennsylvania has always been a leader in the fight for clean water. Polluting waters with substances "deleterious, destructive or poisonous" to fish and aquatic life has been against the law here since at least the 1890s. Pennsylvania's own Clean Streams Law was used as a model for many of the provisions of the 1972 federal act. Pennsylvania protected stream uses and set criteria to prevent pollution even before the United States Environmental Protection Agency was created. Pennsylvania's Constitution enshrines the people's right "to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment."

Clean water is an important issue for all Pennsylvanians. The most recent PA State Data Center Annual Citizen's Survey found that 61 percent of 891 survey respondents would support a voluntary Clean Water Stamp. All Pennsylvanians concerned with preserving, protecting and enhancing our aquatic resources must be concerned about developments on the Clean Water front in our nation's capital. Many in the environmental community believe that the House version of this legislation will roll back longstanding protections of public health and safety.

There is an obvious connection between clean water and the Fish and Boat Commission's mission of "providing fishing and boating opportunities through the protection and management of aquatic resources." I believe that Pennsylvania anglers and boaters and the vast majority of our other citizens do not want us to return to the days when the Monongahela River would not freeze in the winter because of the industrial pollution, or when the American shad and other migratory fish could not swim upstream in the Delaware River past Philadelphia because of the pollution block. We have come too far and made too much progress with our pollution control programs to allow this to happen.

The House version of the Clean Water Act reauthorization bill has engendered much controversy in the environmental community. The Commission is concerned about several areas, including cost-benefit analysis, wetlands protection, compensation provisions and pollution standards.

News reports indicate that Clean Water legislation considered by the U.S. Senate may address some or all of the concerns raised by HR 961. Weakening the federal Clean Water Act will be bad for Pennsylvania's aquatic resources, and we all hope that the Senate will stand up for the resource when they consider this legislation. We cannot be content to just sit back and enjoy fishing, boating, hunting, hiking or just enjoying nature without recognizing the fact that the decisions made today will affect the precious natural resources of Pennsylvania for generations yet to come.

The Fish and Boat Commission's "Resource First" logo reflects the fact that, without clean water, the fishing and boating we all enjoy will be imperiled. The American Sportfishing Association expresses this same concept in another way with its slogan: "The quality of fishing reflects the quality of living." The Congress should keep these thoughts in mind when reauthorizing the federal Clean Water Act, a law designed "to restore and maintain the chemical, physical and biological integrity of the Nation's waters."



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Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

The Delaware Canal by Vic Attardo.....	4
Jerk Baits for Bass by Mike Bleech.....	7
A Beadhead Pheasant Nymph by Chauncy K. Lively.....	11
On the Water with Charles F. Waterman	13
Working Together for Water by Mike Sajna.....	14
Pedal-Power Panfish by Darl Black.....	16
GPS is No Gadget! by Curt Garfield.....	20
Southwest Pennsylvania Trout Streams by Charles R. Meck...23	
PA Fish & Boat Commission Publications List	27
SMART Angler's Notebook by Carl Richardson.....	31

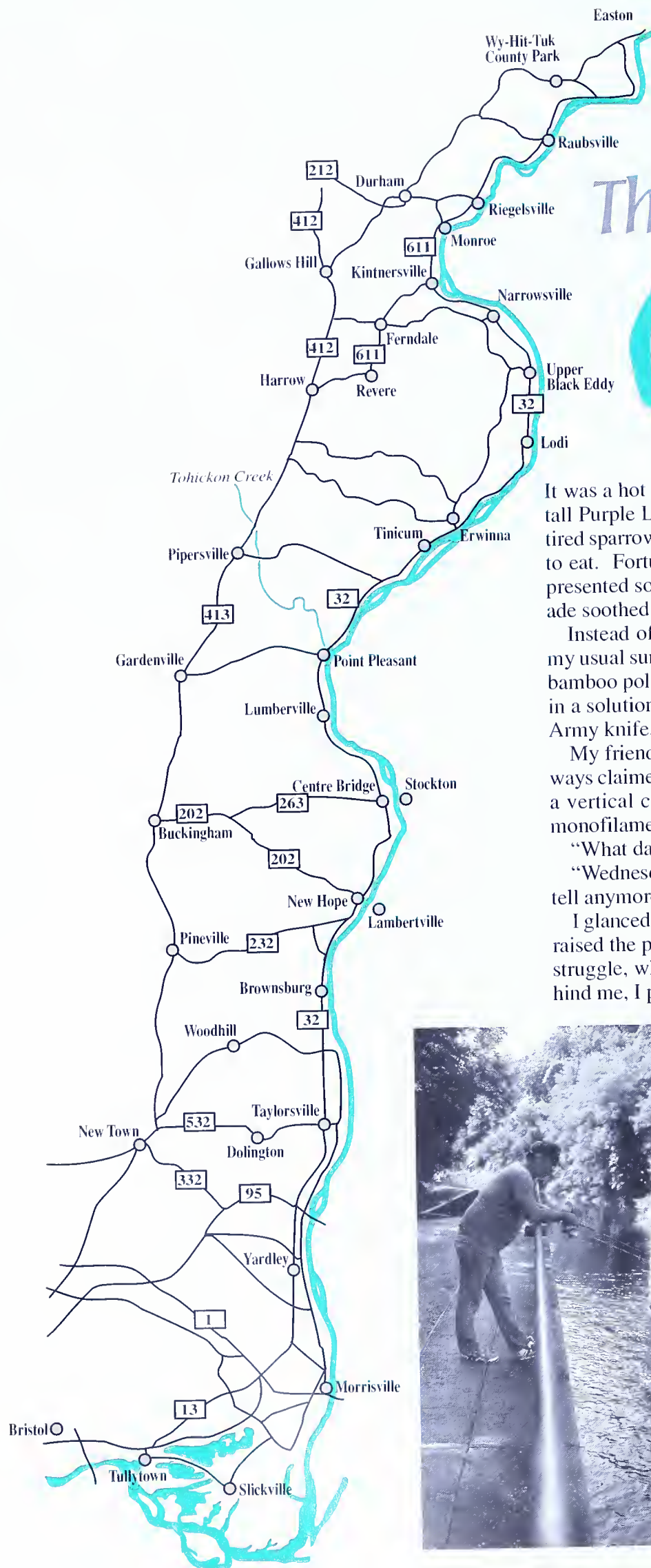
This issue's cover was photographed by Darl Black.

Beltzville, Kahle Lakes Sampling

Reports of preliminary catches from two lake samplings are particularly interesting. Area 5 Fisheries Manager Dave Arnold says, "I was pleased with results of our early netting of 946-acre Beltzville Lake, Carbon County. We took striped bass bigger than 30 inches in some deep-water spots." Arnold also reports sampling several dozen walleyes from 17 to 22 inches. At Beltzville, a 19-pound channel catfish some 30 inches long took top honors for catfish sampling. Two brown trout in the 26-inch class rounded out the day. Panfish catches were light, given cool spring water temperatures and deeper water netting. Still, a number of yellow perch were taken with their walleye cousins, and an occasional small-mouth bass and muskellunge were taken.

The crew of Area 2 Fisheries Manager Ron Lee learned how out of shape some of them were after working one night last April (until 2 a.m.) electrofishing 251-acre Kahle Lake, Clarion/Venango County. The team was intent on catching and marking bass and yellow perch as part of an angler assessment study. They were pleasantly surprised with the number of quality-sized yellow perch there. In two relatively short expeditions, the crew netted and measured well over 1,000 yellow perch averaging more than 11 inches. Catches were additionally gratifying as one angler had just "inferred" the lake was fished out.—Dick Snyder, Chief, Fisheries Management.





The Delaware Canal

by Vic Attardo

It was a hot July afternoon. A horde of bees buzzed around a thicket of tall Purple Loosestrife growing along the water's edge. Occasionally a tired sparrow floated out of the bushes to search the ground for something to eat. Fortunately, for a friend and me the shade of a broad sycamore presented some protection from the sun, while a thermos of cold lemonade soothed our parched throats.

Instead of a graphite fly rod or magnetically-controlled casting reel—my usual summertime angling gear—I was holding a simple, 10-foot-long bamboo pole. I had cut the reed the night before and then soaked the tip in a solution of brine, removing the side branches with my trusty Swiss Army knife.

My friend's pole was actually a little longer—at least that's what he always claimed—but we had both notched the tender end of these shafts with a vertical cut and then spliced and wound some 7 feet of stretchable monofilament onto the limber canes.

"What day of the week is it?" I hazily asked my friend.

"Wednesday, I think," he said. "No, I believe it's Thursday. I just can't tell anymore. Hey look, you've got another bite."

I glanced at the stained wine cork that served as a bobber, and I quickly raised the pole, setting the hook on a fat redbreast sunfish. After a brief struggle, which included getting the long rod hung up in the bushes behind me, I placed my catch in a bucket of melting ice. These were take-home fish.

"Corn's awfully good this year," said my friend.

"So are the tomatoes," I added.

If it had not been for the sound of an occasional car passing on the rural road, or the etching of jet trails high in the sky, I might have believed we had traveled back over a hundred years to a time and place now long forgotten. At any moment, I half expected to see a team of mules plodding along the tow path, dragging a wooden boat filled with anthracite coal and heavy cargo. For along with our old-time tackle, our rolled up shorts, bare feet, and yes, even the straw hats we had donned, my friend and I were fishing on the old Delaware Canal in Bucks County. The canal's earthen walls were brimming with water and we could hear a rushing stream as it poured through an open lock just above us. It was too darn hot to make much of an effort fishing—or to do anything else for that matter—so this was the way we had decided to spend our day.





The Delaware Canal was built between 1828 and 1832 at the cost of \$1.43 million. It is the only remaining, continuously intact structure of the great canal-building era of the mid-19th century.

Raubsville Foot Bridge

Actually, we had chosen our location, as well as our antique accoutrements, to celebrate the refilling of the canal after some four years of fishless emptiness.

For about five years, the northern half of the canal had been practically bone dry, the result of a collapse of the canal's walls and its subsequent inability to hold water. But now, as major repairs were being performed by the state, parts of the canal had been refilled and remarkably there was a considerable number of fish in these new wet areas. Within two weeks of the canal's replenishment, we had caught largemouth bass over 15 inches, fat redbreast sunfish and hand-sized bluegills, as well as bundles of scrappy crappies. The number of fish that had taken up residence in the canal was actually quite astounding and our friendly Commission area biologists and waterways conservation officers did not believe our reports until they saw the activity for themselves.

Like good fishing everywhere, word quickly spread that the canal was hot. Soon young boys were catching bass of three to four pounds, fly fishermen were casting along the banks, and bait dunkers, like my friend and me on this humid afternoon, were coming down to the canal to take buckets of panfish.

Early on, there were two schools of speculation about how these fish had suddenly appeared in the canal. One group of theorists held that the fish had traveled downstream from the Lehigh River, where the canal begins. On the other hand, members of another creed believed the fish had survived in sections of the canal that had remained wet. They believed the fish were simply migrating into new waters.

Whatever theory you want to believe, there are now plenty of fish in the Delaware Canal and we know they were not stocked.

At this point you may be confused, because I have been calling the waterway the Delaware Canal while saying its source is the Lehigh River. I didn't err.

The canal begins, or ends, in Easton at the confluence of the Lehigh and Delaware rivers at Lock 24. The lift locks are numbered from south to north, and this upstream lock is located about 30 yards from the Delaware River. However, all the water that flows into the canal comes from the Lehigh above the Lehigh dam and the new Easton shad ladder.

From Easton the canal runs south, parallel to the Delaware

River, to the city of Bristol and the former sites of Locks 1, 2 and 3, which originally were grouped tightly together. Along much of its path, the canal is within a few yards of the banks of the Delaware, but in places like Uhlerstown, Erwinna, New Hope and Taylorsville, near the Washington Crossing Historical Park, the canal is found some distance away from the big river. Between Morrisville and Tullytown the canal turns inland and the river is nowhere in sight.

Rich history

Built between 1828 and 1832 at the cost of \$1.43 million, the Delaware Canal is the only remaining, continuously intact structure of the great canal-building era of the mid-19th century. Traffic on the canal, which consisted of mule-driven wooden barges, reached its peak just before the Civil War. But in the mid-19th century, the growing railroad system cut into the canal's usage, and in less than 100 years the last paying barge had traversed its length.

In 1978 the canal was recognized as a National Historic Landmark, and 10 years later the Delaware and Lehigh Navigation Canal National Heritage Corridor was created. The canal and its tow path are also a state park.

One would think that with the passage of time there would be no one left to talk about the canal's working days, but on one fishing trip last year I met 79-year-old Alex Cochran who had worked on the canal as a young man with the state forest agency. Now living in a mobile home by the side of the canal, Cochran was born and raised in a canal house at Lodi, which has since been occupied by the park's managers, the DCNR.

Cochran remembers when the canal was "thick with fish" and he recalled how, years ago, he saw a young family on the waterway looking for something to take back to the city for dinner. Cochran took them to a hole where there were "tons of carp" and together they literally shoveled up a whole sackful of fish, which earned him a kiss from the family matriarch.

"You bet I'm happy to see fish swimming in it again," he said, peering down from a low bridge above the waterway. "It wasn't very pretty when it was dry."

Just a few years ago, the canal still contained carp weighing between 10 and 15 pounds, but of course, they disappeared when

The Delaware Canal

the waterway went dry. Last year, almost as soon as the flow returned, I observed schools of one-inch long fish which I first thought were fingerling shiners. The fish grew quickly so that by the end of the summer, when they had become three and four inches in length, I could tell they were young carp. If the canal does not experience any future failures, these fingerlings should be providing bank anglers with large rubberlips in just a few seasons.

There's a bit of uncertainty in any information issued about the canal since the structure is susceptible to damage that could result in another collapse. At this writing, the lower canal in the Morrisville area remains off the state's trout stocking program for 1996. Anglers can also expect intermittent closures along portions of the canal as workers dredge and re Clay the walls. But along most of the canal, between the Lehigh River and Bristol, the water is flowing and the fish are biting.

Access to the canal is good, though sometimes it is a matter of how far your feet are willing to go after you park the car. From Easton to Kintnersville, Route 611 parallels both the river and the canal and there are spaces for one or two vehicles in a number of locations. Below Easton look for the Wy-Hit-Tuk County Park, where there is good parking, and at the locks at Raubsville and Durham and at Frya's Run Park. Below Kintnersville, Route 32 parallels much of the canal, but you may have to turn west onto side roads to reach sections that shift away from the river. There is also parking and picnic facilities at Lumberville, Eagle Island, Yardley and near Tullytown.

The fishing

Fishing the canal is like fishing a cross between a small stream and a farm pond. Like a stream, the canal has current, but there are few side pockets or obstructions that stream anglers would normally target. The locks, aqueducts and migration pipes around the locks are to the canal what riffles are to a stream. It's here that the water flows the fastest and where there is a good oxygen content. It is also the place where large numbers of fish gather at feeding time.

Like a farm pond, the canal holds plenty of weeds in the summer, so weedless lures become a necessity in some spots. The canal above New Hope remained dry for many years, so its exposed bottom grew thick with weeds. Even though these weeds were clearly not aquatic in nature, many survived their submersion through the hot summer. In a few places, they made it impossible to fish, but when the water cooled in the fall, the weeds died and I was able to work a number of previously unfishable locations. These land-based weeds will probably not rise again, so the fish should be more spread out this season.

I certainly wasn't complaining last year. On a number of occasions I climbed down the banks of the canal and stood on the hard bottom in shorts or in waders. Casting upstream with a 5-weight fly rod, I often caught a couple of dozen crappies in a few hours. At times it seemed that every presentation of a size 8 Gold-Ribbed Hair's Ear drew a strike.

In the middle of a hot summer afternoon, when the smallmouth were taking a siesta in the main river, I'd walk back to the canal, tie on a size 6 chartreuse popper and catch bluegills, red-breasts and largemouth bass under the shade of some overhanging trees. On a couple of occasions I watched one particular fisher-

man liveline sunnies in the shadows and catch largemouths over three pounds. It also seemed that children were always hanging over the breastworks of the locks, dangling worms and bobbers at the fish. The fish frequently responded.

Techniques

As you can see, successful canal fishing is not limited to one technique. However, the same stealth needed to approach wary trout in a small stream is often needed to catch these warmwater fish. After a couple of weeks of being caught and released, the largemouths got fairly wise. They'd attack live bait, but carelessly tossed lures would send the fish running for cover. The most successful canal fishermen got the message and started approaching the fish from downstream, just as if they were fishing for wary trout.

At times fish feeding near the locks face the current and pick off whatever comes down the chute. Rather than stand above the fish where they are easily spooked, a few fishermen got into the water below them—the canal's average depth is about 4 feet, its average width about 20 feet—and cast upstream. The tactic fooled many a bass, crappie and redbreast.

Away from the locks, in the canal's long, slow pools, live bait was the best choice. Pieces of garden hackle, meal worms and even grasshoppers and crickets gleaned from the canal's banks produced wonderful results. Away from the current and overhanging trees I eventually had to give up fishing lures and flies during the heat of the day. But in the early morning and late evening, a few panfish and bass were generally susceptible to popping bugs in the sluggish flows. The trick during the warmest part of the day was to stroll along the canal casting to a variety of overhangs and different pods of fish. Once a few fish were taken from a spot in the slow waters, the remaining fish in the school became skittish. Ambushing another pack of fish farther upstream brought on a new set of responses.

Fish that were gathered near the locks and aqueducts also had their periods of peak and low activity, but these were less connected to the times of day as they were to the amount of water moving through the canal. When a lack of rain reduced the strength of the flow, even the fish located near the locks were difficult to catch. But when a swollen Lehigh raised the canal's water level a half a foot or more, the fish would gather at the outflows like soldiers at a mess tent. At these times it became ridiculously easy to catch a huge smorgasbord of gamefish. Unfortunately, with crews opening and closing locks to make repairs or restrict flows, there was no way of pinpointing when the water levels would rise, other than a local deluge.

Fishing the Delaware Canal does have its limitations. No matter how large some of the bass become, no one is ever going to hold a tournament on these waters. But the canal is a good place to take a youngster to be instructed in the fine art of angling and as a fly rodder, I enjoyed practicing my trade in these waters.

The canal is truly an unusual place. There aren't many of these structures left in the country, and even fewer that can be fished, so this 60-mile-long stretch of water shouldn't be ignored. But be careful when you walk down the path—if you see a couple of barefoot guys still lying on the banks asleep under their straw hats, please don't trip over them.

JERK BAITS *for Bass*

(L to R) Red Fin, Rebel Minnow, Thunderstick Jr., Rapala Minnow, Long A.



by Mike Bleech



This Lake Erie smallmouth rose several feet to grab a jerked crankbait.

Three pools below Sayre and not a smallmouth had shown any interest in the assortment of jigs and crankbaits I had cast into every likely looking piece of water. But patience is essential to float fishing. No matter how I looked at it, I had several miles of the Susquehanna yet to float and fish. Maybe it wasn't what I was using, but how I was using it.

When fishing is tough I fall back on one of the lures that gives me the greatest confidence. The natural shiner-colored minnow lure I chose hit the water where the tails of two riffles joined into a deeper chute. Instead of a steady retrieve, I jerked the lure under the surface. Before it floated to the surface I gave it another short jerk, then another. As I started a fourth jerk the lure stopped. The jerk set the hook, and immediately a 13-inch smallmouth cleared the swirling water.

Sometimes the best way to get the attention of a bass is to trigger their predatory instinct to attack. You can observe this kind of behavior in dogs. Walk by a dog and it will probably ignore you. But start to run and there is a good chance it will chase you. It is the same with most predators. Crank a lure steadily by a bass and if it is not aggressively seeking a meal it will probably ignore the lure. But jerk the lure so it appears to be trying to get away and the bass is more likely to strike it.

Of course, it does not always work. The success of any fishing method largely depends on the mood of the bass. What is often described as fishing skill is a combination of mostly knowledge and less important physical skills that include the ability to fish long and hard, and reaction time (fishing skill = knowledge + physical ability).

There is also the luck factor, which plays a varying degree in fishing success (fishing success = skill + luck). Luck is beyond our control, so we must concentrate on

skill. If we rely too much on luck, almost all success will occur while bass are aggressively and non-selectively feeding. This does not occur very often, and even when it does, you must be in the right place. Fishing success can also be described by the equation "fishing success = time + place + tactics," in which both luck and skill play a role in all factors on the right side of the equation.

Becoming a highly successful angler, unless you are blessed with extraordinary good luck, is a matter of increasing the

role of fishing skill, and relying less on luck. Jerking for bass is a relatively difficult fishing method because it requires much more effort than merely casting and cranking. However, it appeals to bass in a variety of moods.

Bass moods

Bass moods can be simplified into four types—aggressive, selective, neutral and inactive. This is just my description based on angling observations. In no way do I mean to imply that bass are either this simple or this complicated.

Catching bass in an aggressive mood is relatively easy. Whenever most anglers are catching bass, the fish are in this aggressive mood. Just the basic fishing skills are adequate. You do not need to work so hard for your bass, but jerking will accomplish the task.

Bass can be selective feeders. Raystown largemouths may feed selectively on schools of shad. Upper Susquehanna smallmouths may feed selectively on hellgrammites. Lake Erie smallmouths may feed selectively on smelt. Lake Arthur largemouths may feed selectively on crayfish. Any of these selective feeders is likely to attack a jerk bait because it triggers that predatory instinct.

I believe bass are most often in a neutral mood. In this situation they are not aggressively seeking food, but they can be tempted. A jerked lure might trigger a strike. It forces the bass to make a quick response or lose the opportunity.

Forget about inactive bass. By definition these bass cannot be tempted to strike. Operate under the assumption that not every bass in the water you are fishing is inactive.

It is important to realize that not all bass are in the same mood at the same time. Virtually anytime some bass are aggressive, some are neutral and some are inactive. This is the reason why just covering a lot of water is a good approach to fishing. The odds are good that you will encounter an active bass. The odds are much better still if you use a method such as jerking that appeals to bass in various moods.

Mechanics

Jerking for bass is simply jerking the rod to accelerate the lure. Variations are infinite, and often seem important. A couple of jerks during an otherwise steady retrieve to get a reaction from followers fits this category. This is a good, standard procedure whenever you crank for bass.

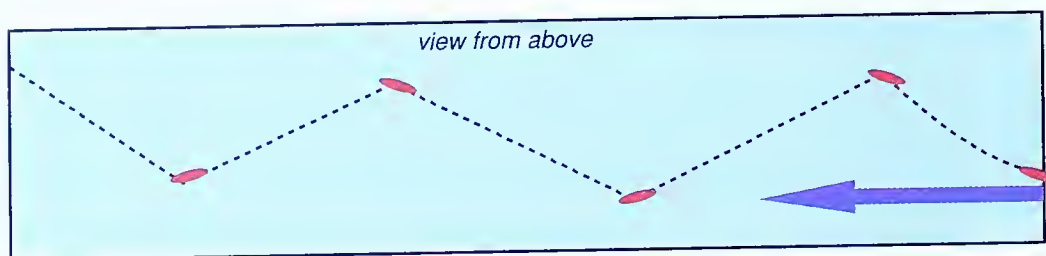


Figure 1—Lures that wander from side to side when jerked are generally more effective than those that track straight through the water. Some lures can be tuned to behave this way. Some can't be tuned.

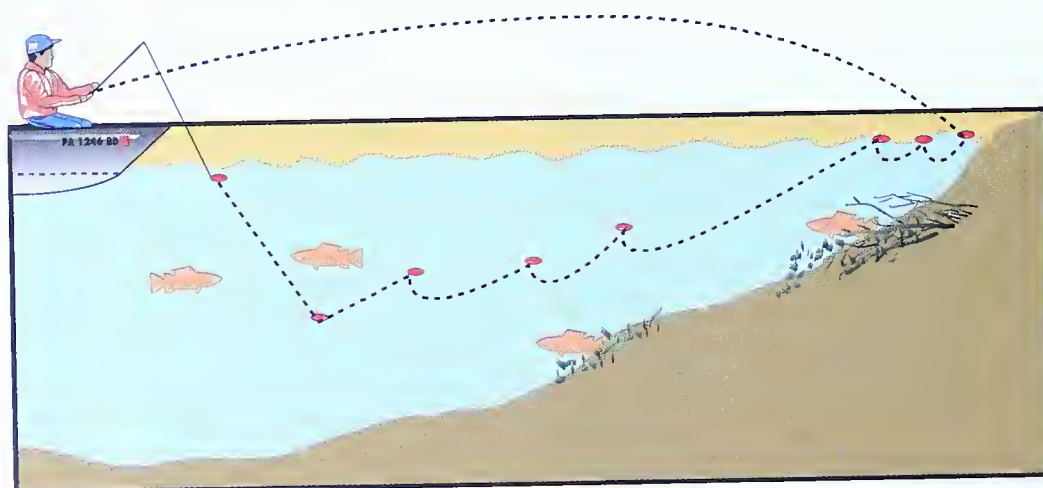


Figure 2—This method is effective for covering a lot of water. Cast close to shore. Jerk the lure twice, letting it float to the surface each time. Next, crank the lure straight about five feet, and then jerk it until it is almost to the boat. Reel the lure straight up to the boat until it is visible, and then complete the retrieve by letting it float the last few feet to the surface.

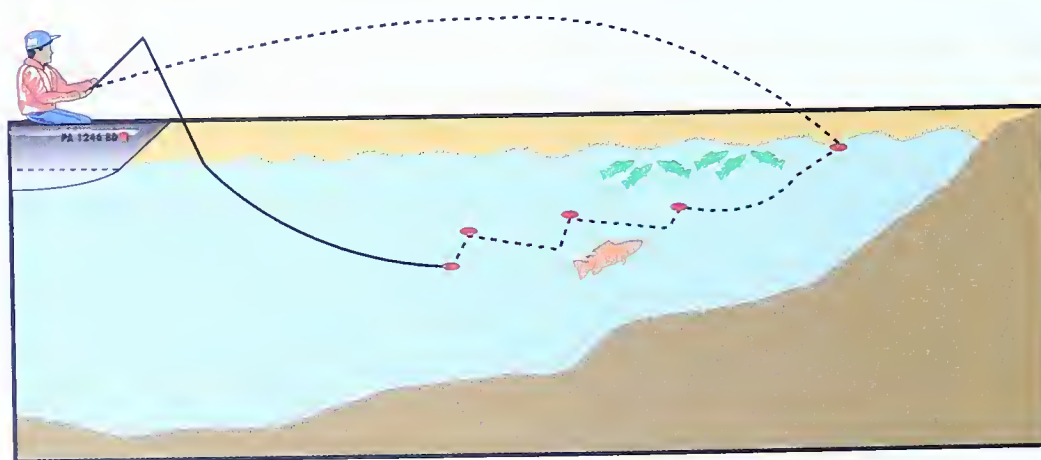


Figure 3—Lures that sink often catch larger bass than floating lures jerked through schools of baitfish that are busted by bass. The larger bass often suspend beneath the bait schools waiting for injured fish to fall below the pack.

The entire retrieve can be a series of jerks, reeling only to pick up slack line. These jerks can be fast or slow, short or long. You can pause between jerks. By pausing until the lure bobs to the surface, jerking becomes a surface fishing method. Using exactly the same rod movements and timing, this becomes a jigging retrieve when a sinking lure is used.

Jerking a lure is performed by jerking the rod tip away from the lure. At the least, this accelerates the lure. Some lures, in addition, dart to one side or the other. I have found that lures which dart to one side and then the other are more effective than lures that track straight, or dart to the same side each time they are jerked (see Figure 1).

Lures must be well-tuned or they will roll when they are jerked hard. Because there are several ways to tune different lures, and some manufacturers either suggest how to tune their lures or warn against it, I won't suggest how to tune lures. Tuning can destroy lures. Regardless, I tune my lures very carefully. Nevertheless, those that I cannot tune satisfactorily go in a yard sale.

Jerking a crankbait that imitates a minnow or a crayfish makes it appear that something is wrong with that critter—it is injured or trying to escape.

Attitude is important when using this method. When you jerk a lure, try to get a mind set of an animal trying to escape a predator. Put your mind at the lure, and visualize a big set of jaws closing in for the kill.

Which lures are best for jerking? Almost any. But because jerking is so similar to jigging, jigs are eliminated from this subject, as are topwater lures intended for "walking the dog." The lures I am suggesting for this jerking approach are lures that were intended for cranking. This is the twist, the deviation from the norm. This is what shows the bass something thousands of other bass anglers are not already showing them.

Now I will let you in on one of my most effective fishing methods. This is used for pounding shorelines from boats, covering a lot of water. It appeals to fish in different ways without changing lures. In effect, it covers water quickly with three different lure presentations. Use it as a search method, looking for concentrations of bass, or on new water. It is the perfect way to look for those few willing bass whenever fishing is tough, a confidence method to fall back on when nothing else works.

Use a floating/diving lure. The slope

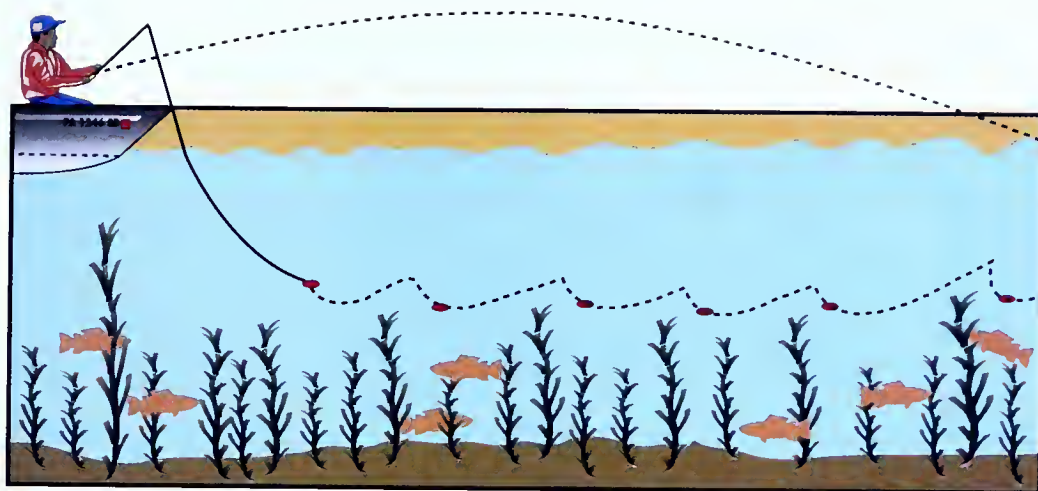


Figure 4—Early in the bass season before aquatic weeds grow to the surface, jerk floating minnow lures just over the tops of the weeds.

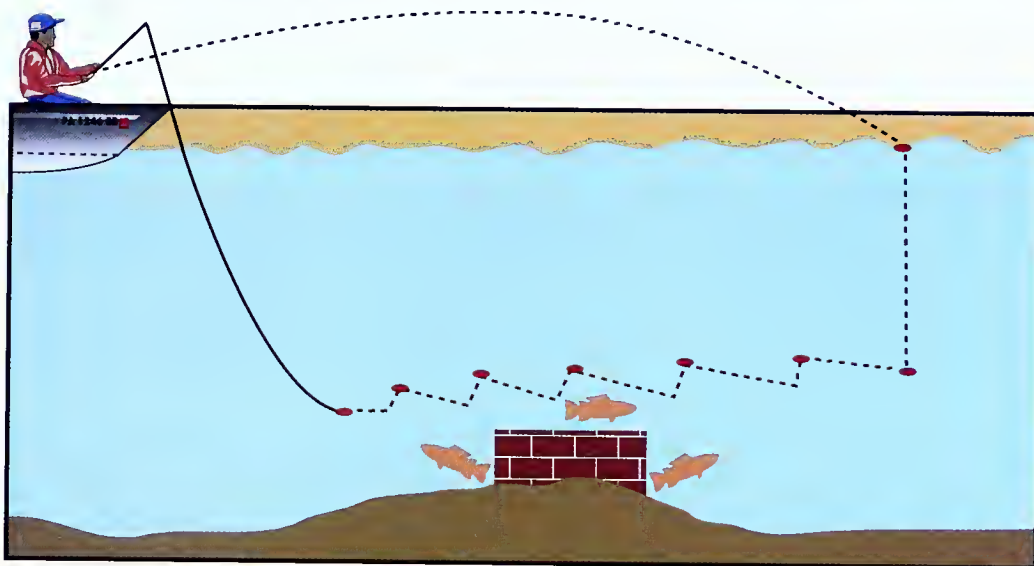


Figure 5—Use a sinking lure to jerk for bass in deep water. Cast beyond the structure where you expect to find bass, and count the lure down to the proper depth. Jerk the lure past the structure, pausing long enough between jerks to let the lure sink back to the proper depth.

of the bottom should dictate which specific lure you use. For gentle to moderate slopes I like a floating minnow lure—for example, a Thunderstick, Rapala Minnow or a Rebel Minnow. For steep slopes, use a lure that dives six to eight feet, such as a Rebel Fastrak, Fat Rap or a Deep Thunderstick Jr. The lure should not dive so deep that it follows the bottom. As the lure gets close to your boat, you want it in front of suspended bass. Often when bass fishing seems slow, the reason is that many bass are not in the shallow cover where anglers usually catch them, but instead they're suspended, perhaps feeding on schools of shiners or shad.

Cast the lure close to shore (see Figure 2). If there is shallow cover where you suspect bass are hiding, try to cast inside the cover. Let the lure rest motionless on the surface for a few seconds. Then give it a short jerk, a twitch, and let it rest a few more seconds. Repeat that step one more time. This should get the attention of any aggressive bass in shallow water.

If a bass has not struck the lure by this time, the surface approach is not working, so crank the lure at a medium pace for about five feet. This gives any bass in the area a second look at the lure.

Then jerk it the rest of the way back to the boat. This third look appeals to suspended bass that are aggressively feeding on schools of baitfish, and it might appeal to neutral-mood suspended bass.

In lakes with good populations of schooling, pelagic baitfish such as emerald shiners or gizzard shad, bass often set up on points to attack the baitfish schools. Points act as one-sided funnels, providing bass with cover and abundant food. The best time to fish these points is while bass are attacking schools of baitfish, but sometimes they can be induced to strike otherwise. Try a fast-jerking retrieve, beginning as soon as the lure hits the water. The erratic retrieve resembles an injured fish, which is a relatively easy meal for a bass. They will strike it before they strike a real minnow.



Cowanesque Lake

When bass are busting schools of baitfish, I find that I catch larger bass with sinking lures than with lures that rise toward the surface between jerks. I believe the larger bass have learned to hover below the action where they can pick up the easy meals, the baitfish crippled by the attacks of other bass (see Figure 3).

Early during bass season before aquatic weeds have reached their full growth, when

there are two or three feet between the top of the weeds and the water's surface, jerking minnow lures over the tops of the weeds often produces exciting action. Bass that are down in the weeds have just a narrow window where they can see the lure, so keep jerks short, maybe three feet, and pause several seconds between jerks (see Figure 4).

If there are several feet between the weed

Jerking Gear

Jerking puts a lot of stress on fishing tackle. You get the best results using a fast to extra-fast action rod that is powerful enough to jerk a lure without bending appreciably beyond the end quarter, but one that bends farther under the stress of a fair-sized bass.

If the crankbait you are using does not have a split ring at the hook eye, attach it to the line with a round-ended snap. This gives the lure more action, increasing the side-to-side wander.

Use eight-pound-test low-visibility monofilament line in clear water. In stained water, I like the way low-stretch line makes the lure behave. Jerks accelerate the lure more quickly. I put a six-foot, 10-pound-test monofilament leader between the lure and braided low-stretch line.—MB.

tops and the surface, try a neutral-buoyancy lure, or add weight to a floating minnow lure. This method is generally most effective when the lure occasionally rips through the tips of the weeds. As the season progresses and the weeds grow taller, switch to lures that run very shallow.

During summer, bass, particularly larger bass, often move away from the shoreline to mid-lake structure such as sunken creek channels. An old angler's tale describes this as the "dog days of summer when the fish do not hit." Nothing could be further from the truth. In fact, bass feed heavily through summer. But catching bass is much more difficult in deep water than in shallow water. You must know how to read a sonar, be patient and persistent.

Cast a sinking crankbait, and count it down to the proper depth (see Figure 5). If the bottom is not snaggy, you can let it sink to the bottom. Retrieve by jerking about three feet, separated by pauses that are long enough to let the lure sink within a couple of feet of the bottom. When the lure is so close to the boat that it is difficult to keep it near the bottom, reel it straight back to the boat medium-fast, pausing only as the lure is visible. You will enjoy those strikes that occur at that last pause.

These are just a few special situations in which jerking crankbaits can be productive. Jerking to some extent almost anytime you use crankbaits will probably improve your fishing success.

JERK BAITS for Bass



ANGLER

photos-Mike Blech

A Beadhead Pheasant Nymph

by Chauncy K. Lively *photos by the author*

The reddish-brown fibers from the tail feathers of the ringneck pheasant have long been recognized as prime material for fly bodies, both wet and dry. The fibers possess a flue that provides a soft, fuzzy appearance when wrapped around the hook's shank, an attribute that obviously is attractive to trout. The material's principal fault is its fragility. However, longevity may be greatly enhanced by counter-winding with fine-gauge copper or gold wire.

Several authors have devised pheasant tail patterns, notably G.E.M. Skues and Frank Sawyer, both of England. Sawyer's nymph pattern is unique in as much as it uses the finest copper wire as a substitute for tying thread. The wire not only adds some weight for quick sinking, but it also makes for a more durable fly.

Over the years I have dressed several different nymph patterns using pheasant tail fibers as the main ingredient, and all have been more or less successful. One memorable occasion comes to mind as vividly as if it had happened last week. In 1959 we were fishing upper Spring Creek in early June. Spring Creek was in its prime in those days and the hatches were profuse, both in variety and sheer numbers. In late afternoon sulphur spinners began to fall, and within a short time the water was completely covered with spent mayflies.

Normally, the sight of flies in such abundance triggers a great flow of adrenalin. But on this occasion excitement soon turned into frustration. I was using a spinner pattern and not only was it impossible to find my fly among the thousands of naturals, but whenever I made a pickup to recast, my leader and line were plastered with spent insects. I kept at it for a while, but it seemed a fruitless endeavor and I decided to take a new approach.

I bent on a size 14 Pheasant Nymph, reasoning that a fly drifting below the cluttered surface would have a better chance to be seen by trout. As the nymph drifted alongside a submerged limestone ledge, it was taken by a trout and after a long struggle I netted one of the prettiest big browns I had ever seen. I weighed the fish in the net and after deducting the net's weight the scale indicated an even four pounds. I quickly photographed it, held



it gently in the water until it could swim out of my hands, and watched with satisfaction as it disappeared under the ledge. That trout was the largest I had released to that time and the exultation I felt was almost like a religious experience. I haven't killed a trout since.

Several popular pheasant tail patterns use three long tail fibers in a nearly continuous tying routine in which the thread, wire ribbing and pheasant fibers are the sole materials. The tips of the fibers are tied in as tails and the ribbing is secured at the base of the tails. The long ends of the fibers are wound to form the abdomen, followed by the ribbing wire, which is tied off and trimmed at the abdomen's fore end. Up to this point about one-half the length of the fibers have been used. The fibers are then wound to form a thorax, and finally they are lapped back and forth over the thorax to represent the wing case.

This is certainly a quick, efficient tying procedure and I have used it many times. However, over time I have found the unprotected tails, thorax and wing case to be vulnerable to a trout's sharp teeth.

As the years spin by I find myself looking increasingly for greater durability in fly patterns. Whenever possible in dressing nymphs, I like to use hackle ribs for tails, fur dubbing for thoraxes and polyethylene sheet for wing cases. I have nymphs made from these materials that I still use after several years of hard use.

A beadhead version is a logical extension of the present pheasant tail nymph patterns. The gold bead seems to add allure and its modest weight helps to maintain an effective drifting depth. The Daichi 1180 hook in size 12 or larger is ideal for this pattern. With smaller hooks, or those with narrower bends, you'll find it difficult to slide the bead around to the eye.

Dressing: Beadhead Pheasant Nymph

Hook: Size 12 Daichi 1180 or equivalent.

Head: 1/8-inch gold bead.

Thread: Brown 6/0 prewaxed.

Underbody: .021-inch monofil strips (2) cemented to the sides of the shank and tapered toward the bend.

Tails: 3 striped brown hackle ribs.

Abdomen: 5 or 6 pheasant tail fibers.

Thorax: Dubbing of dark-brown fur or synthetic.

Legs: Partridge hackle.

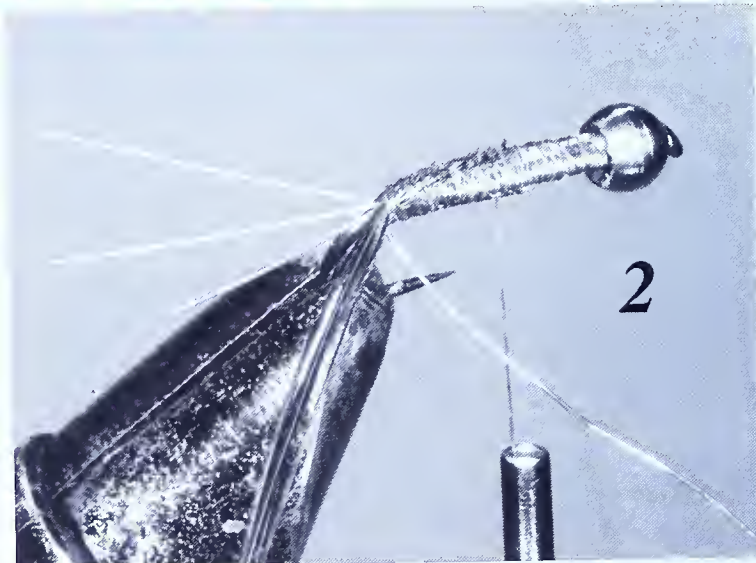
Wing case: Cut from polyethylene sheet, sanded and tinted with brown marking pen.

Ribbing: Fine copper wire (wire from a discarded lamp cord is ideal).

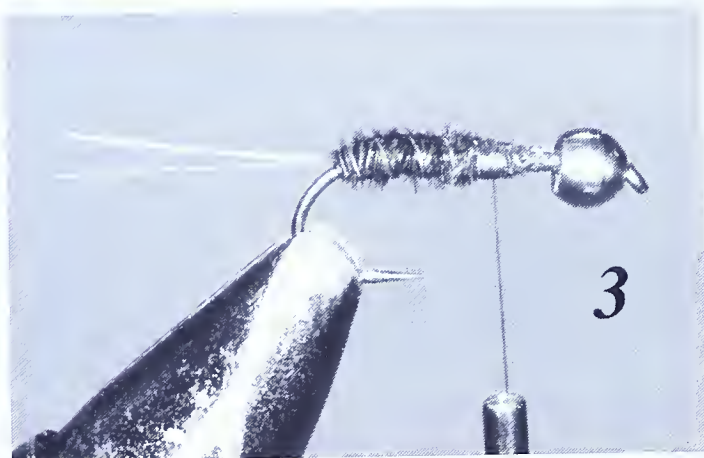
A Beadhead Pheasant Nymph



1. Mount the bead's small opening over the hook's point and slide it around the bend to the eye. Then tie in the thread behind the bead and wind back to the bend.



2. Strip the barbs from three medium-size brown hackles. Tie in the three ribs as tails and wind between to separate. Bind the long ends of the ribs to the underbody and trim the excess ribs behind the bead. Tie in the pheasant fibers and ribbing wire behind the bead and wind over to the bend. Trim the excess fibers and ribbing behind the bead. Advance the thread to mid-shank.



3. Twist the fibers into a bundle and wrap forward to the mid-shank. Tie off and trim the excess. Wind the ribbing counterclockwise, tie off and trim the excess.

4. Wax the thread and apply the dubbing fur. Wrap the dubbing to the bead and tie off.



5

5. Tie in a small bunch of partridge hackle fibers on each side behind the bead. Cut a strip of prepared wing case, slightly wider than the thorax, and tie in one end behind the bead, with the long end extending forward.



6

6. Fold the wing case back, wind over the fold and whip finish behind the bead. Trim the wing case over the rear of the thorax and cut a notch, as shown. Finally, lacquer the finish windings.



On the Water

with Charles F. Waterman

Hidden Bass

When my elders told me the lake ("pond," they called it) had filled up with weeds and was not worth fishing, I took their word for it. But then I saw a man wading chest-deep in it with a casting rod, and although he was a long way off it appeared he caught a fish.

"They're bass," he said later from dry ground. "Bass would live in a hay mow if you'd flood it. They like all that stuff. They can swim where I can't even wade good."

This, of course, sentenced me to a lifetime of wading, paddling, rowing and poling through lily pads, elodea, milfoil, eelgrass and dozens of squishy things I can't name. Bass, especially largemouth bass, hide from their prey and from their enemies in submerged crops of all sorts. Smallmouth bass may be a bit more choicy, but they like to hide, too, sometimes in the same places. No fishing tackle was really designed for this sort of operation, but poker-stiff baitcasting rods, dainty fly rods and tackle in between will work for those who know it.

The lure makers have produced almost a hundred years of plugs, metal wigglers and plastic worms for use in the weeds, but most of their users fish the edges instead of the weeds themselves. I have heard them called "fainthearted."

Weeds and pads have been unable to compete with the gurgles and tinkles of moving water, but they have their appeal for the faithful, who slip into them in waders, floater bubbles, boats, canoes or just wet clothes. There are bottoms a wader sinks into and flounders out of. There are some that put forth unpleasant odors as you disturb rotting plants, and there are pleasantly firm ones where you may stumble into an old bass bed.

The true weed-worker is a little skeptical of "weedless" electric motors, although they are getting better. He needs a particular kind of stealth, for it's possible the whole submerged landscape is knitted together. A bass might feel his progress from 20 feet or more.

And although weed anglers tend to believe in heavy tackle and a heavy hand, there is an unsung merit to flyrod bug fishing. The bug can be dropped into a little pocket and then picked up without disturbance of the surrounding territory, a skill unthought of by many anglers who suddenly find themselves being dainty where they had planned to be violent.

Weeds and pads by the acre are hard to read, but there is the business of looking for edges of one kind or another. And for some years I thought emergent arrowhead was especially attractive to bass. But I had caught fish there simply because it marked some sort of break in a pattern of lily pads and bass can take it or leave it.

Most surface strikes in the weeds or bonnets are mysterious, the cover causing fish to strike harder sometimes and to nibble delicately sometimes. Unless he jumps there's likely to be a



bit of suspense, a little fellow often aided by the pounds of weeds he collects and a big fish being bogged down by it. Last summer, several of us waded some of the thickest networks a bass could navigate, and my friend's strike sounded even louder in the sundown calm. He floundered toward his prize, lifting his flyrod and proceeding in a sustained stumble. He plunged his arm down where his bug had disappeared.

"He sure lost a lot of weight while I was playing him," he said.

There were the largemouths who lived in a circular lily pad patch some 70 yards across. They used to come to the edge and strike bait just as the sun dipped. Even outside the pads there was a variety of growth with eelgrass and some mossy things I could not name. Floundering trips into the pads simply didn't produce. We ambushed them. We even anchored a boat just off the edge and waited for the sun to turn red and for the first tentative swirls next to the broad pads. But such situations are rare and that isn't really weed fishing, I suppose. It did not involve tangled feet or throwing to pockets.

On one lake there has been a minor but persistent disagreement between anglers and non-fishing residents of waterfront homes.

"I don't like those weeds and things in front of my house," the man said. "I came here because it's scenic and I want to look out at clean water. That's why I work to get those weeds killed."

"There are a lot of living things in a square yard of water growth," the angler said, "but the most important thing is bass."

ANGLER

Working Together for Water

by Mike Sajna

It may sound like a cliché, but occasionally something good really does come out of something bad. Consider what happened to the West Branch Tunungwant Creek on the campus of the University of Pittsburgh Bradford, in McKean County.

A few of years ago, Pete Buchheit, the school's director of facilities management, had a work crew out sealing road surfaces on campus. Before the job was finished, an unexpected rain shower struck, and unknown to Buchheit or anyone else, some of the sealant washed into the West Branch Tunungwant, or as it is known locally, "The West Branch Tuna."

At home that evening, Buchheit answered a knock on his door to find himself confronted by a couple of waterways conservation officers holding five-gallon buckets of dead fish, mainly suckers, minnows and sculpins. "They questioned me. I thought I was going to jail," Buchheit recalls.

The officers listened to Buchheit's explanation of what must have happened. When he assured them that the fish kill had been an accident and that the university would take whatever steps were necessary to make amends, the officers made arrangements to solve the problem.

Because of that unfortunate incident, Buchheit eventually became friends with waterways conservation officers in McKean County. From them he learned that the Fish and Boat Commission had wanted to stock trout in the West Branch Tuna, but had been stopped by landowners along it who did not want anglers on their property and threatened to post their land if the stream were stocked. The West Branch Tuna then held a small population of wild trout and other fish, and was open to fishing.

From his own experience, Buchheit also knew that members of the Pitt Bradford administration had expressed interest in seeing this stream stocked with trout to increase the recreational opportunities

available to the campus students, faculty and staff. So Buchheit contacted Commission Area 2 Fisheries Manager Ron Lee to discuss the possibility of establishing a special-regulation project on the mile of stream owned by the university.

Lee considered the opportunity. Pitt's portion of the West Branch Tunungwant was designated a Delayed-Harvest, Artificial-Lures-Only project. That was about three years ago. Since then the area around the project has become something of a well-used recreation spot. "It's become almost like a park for the community," says Carol Baker, the school's dean of academic affairs. "Parents often bring children to the stream because it is close to town and has good access. They also drop their kids off and pick them up a few hours later as they might at a park. Or they use the roads and trails around the stream as bike paths. It has just become a pleasant place to be whether you are fishing or not." Although the original reason for the university seeking to have the stream stocked with trout was to provide additional recreational opportunities for its students, staff and faculty, Buchheit says the project has been a great public relations vehicle for Pitt Bradford.

"We're really proud of what we have here and we just thought this is another way to introduce the public to the campus," Buchheit explains. "It was a natural. It was here. It cost the university no money other than a little bit of litter cleanup from time to time. And we didn't have to do a thing other than tell the Fish and Boat Commission they could use it."

Buchheit, Baker and Pitt Bradford President Richard McDowell are themselves trout anglers who fish the West Branch Tuna. Baker says she stops at the stream for a half-hour after work to relax, which has caused something of a

problem. Those half-hours have a way of stretching into two hours and getting in the way of things she had planned to do after work.

"It sometimes makes it tough to get things done at home," she complains, but with a smile.

The West Branch Tuna also has provided Baker with one of her most memorable trout fishing experiences, one that still makes her eyes gleam with delight. A native of Florida, Baker has fished all of her life, but for warmwater and saltwater species such as bass and redfish. She did not begin fishing for trout until she came to Pitt from the University of San Diego at the end of the 1980s. She reached what has so far been the pinnacle of her trout fishing experience one evening on the West Branch Tuna when she hooked an 18-inch brook trout that she believes must have been a holdover from the previous year's stocking.

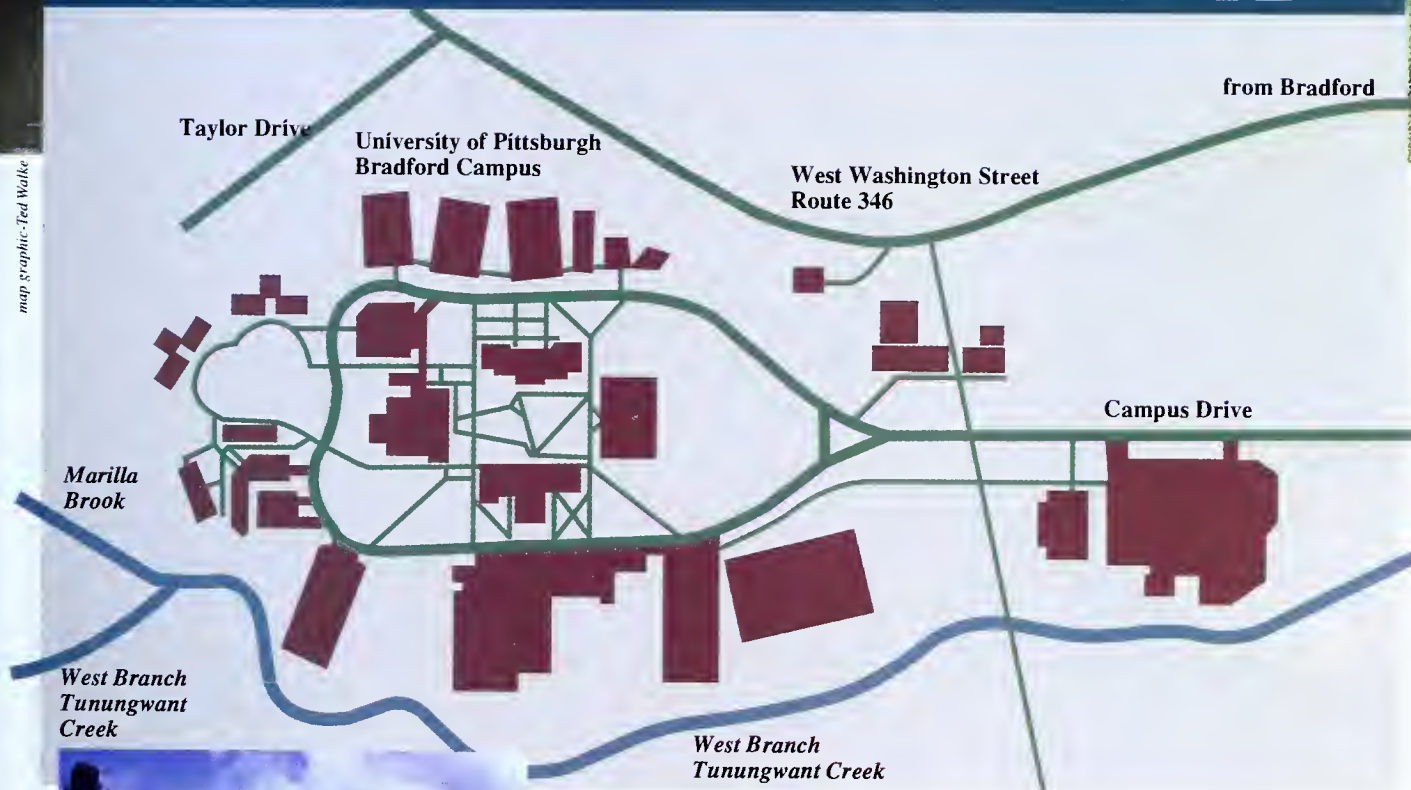
"It had an intense salmon-colored belly," she says. "I mean, the color was bright, bright, bright. And it had a hooked jaw like the salmon on the West Coast. I had never seen that in a trout before."

Personal experiences notwithstanding, Baker says she is proudest of the fact that the West Branch Tuna project has found its way into the academic arena. In the fall of 1995, as part of its physical education curriculum, Pitt Bradford began offering a fly fishing class on the stream. The class is the first of its kind offered by any of Pitt's five campuses and was among the first to fill up during the registration period.

Even before the fly fishing class, students were making good use of the stream. The upstream end of the project is near the residence halls and students can often be seen fishing it. Baker remembers a certain young man in his early twenties who she met on the stream one day during finals week.

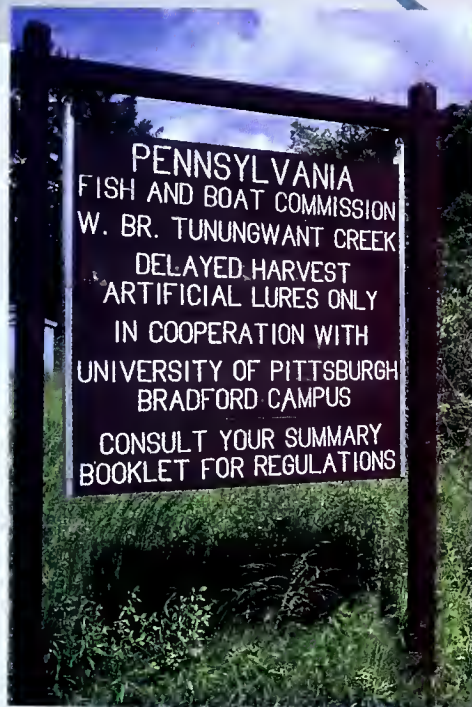


THE TUNA



Three years ago Pitt's portion of the West Branch Tunungwant was designated a Delayed-Harvest, Artificial-Lures-Only project. Since then the area around the project has become a popular recreation spot.

map graphic: Ted Walker



The cooperative agreement between Pitt Bradford and the Fish and Boat Commission, under which the West Branch Tuna was stocked with trout and its Delayed-Harvest project established, makes the stream unique in the Commission's Northwest Region.

When she struck up a conversation with the man, she learned he was a student. He told her he had been fishing the stream for the past few days, which caused Baker to wonder what he was doing on a trout stream during such an important week. She thought: "Here is a guy spending all of his time fishing. He's not studying. I bet I'll see him on the dismissal list pretty soon." I was not feeling too good about it." The next time Baker saw the young man, however, was during induction ceremonies for the freshman honor society. The student who had worried her was being installed as the society's president. A few months later, she also presented him with an award for being Pitt Bradford's top engineering student.

"It turned out the young man was using the stream to relax before tests," Baker says. According to Lee, the cooperative agreement between Pitt Bradford and the Fish and Boat Commission, under which the West Branch Tuna was stocked with

trout and its Delayed-Harvest project established, makes the stream unique in the Commission's Northwest Region. Both the university and Lee also report a lot of positive feedback on their efforts.

The university continues to work for the stream. In the fall of 1995, Pitt persuaded the Bradford Water Authority, which owns a dam on the waterway upstream of the campus, to release water from the bottom of the dam instead of the spillway. The change means that the stream's water will remain colder, and so more suitable for trout, longer into the season.

"That's another cooperative venture that we think really will make a significant difference in the stream," says Pitt Bradford President McDowell. "It should really improve the quality and make the fishing even better."

"With all the problems you hear about today, it's a nice joint venture," Lee says.

ANGLER



Pedal ower anfish

by Darl Black

Anglers note: The Commission requires those using float tubes on Commission-owned or Commission-controlled lakes to wear a PFD. You must also wear a PFD when using these devices on state park lakes.



Check out closely the tools of the trade for late-spring, early summer panfishing. Stick to ultralight spinning gear and rods of 6 to 9 feet. Fly rod gear works well with the same micro-baits you'd use with spinning tackle, minus the float.

Below, an ice dot spoon and a hackle ant, each tipped with a maggot, are sure bets for luring bedding gills.

My dad receives full credit for putting me on the right track with fishing at a very young age. Of course, laboring five to six days a week at a local manufacturing plant, Dad could squeeze in only one day on weekends for fishing. However, I was consumed with the desire to fish more than one day a week. Starting about age 10, when I was permitted to venture out on my own, I would walk or ride my bike to a local fishing destination.

A short hike through a woodlot brought me to the McCullough farmpond, which was filled with hungry sunfish. When I wanted a little more adventure, I would tie my two-piece spinning rod to my bike, throw a bit of tackle into a knapsack along with a can of freshly-dug red worms, a peanutbutter sandwich and canteen of water, and pedal five miles to a beaver pond where bluegills were as big as saucers.

When my dad took me fishing in the family motorboat, our efforts were directed toward bass, crappies or walleyes—never sunfish. Seeing that I reached my panfish hotspots by walking or biking, I grew up associating “sunnies” fishing with foot power instead of motor power. Although these days I drive to the lake, I still use foot power to reach sunfish when angling the panfish peak.

During the early summer when sunfish fill the shallows, I slip on a pair of chest waders and sink into the seat of a float tube. No gas outboard, no depthfinder, no electric motor, and no huge tackle box. Instead, it's just one rod and a small selection of lures, with my feet providing the power, of course.

Even though many large impoundments offer good panfishing, big waterways are the domain of roaring powerboats. On these waters, safety becomes an issue for the belly boater. However, there are quiet waters where outboard motors are not permitted.

Quiet waters include electric-motor-only Fish & Boat Commission lakes; Game Commission-controlled waters, which prohibit any type of motor; certain county park lakes and city water supply reservoirs with similar restrictions; and finally the

good old farm or quarry pond. Besides being a safe haven for tubers, these kinds of waterways generally provide excellent sunfish habitat.

The actors

The “sunny” population of any lake is generally comprised of more than one colorful species. Bluegills and pumpkinseeds have starring roles in lakes across Pennsylvania. But anglers are likely to encounter other supporting sunfish along the way. Certain species are native only to select areas of the state, and some non-native species have been stocked here and there, particularly in private ponds. Do you know your sunfish?

Bluegills vary in body color, ranging from yellow to dark blue. The sides are usually marked by six to eight vertical bars, but often the bars are absent. The most distinguishing feature is an all-black gill-cover lobe, also referred to as the ear flap. Under ideal conditions, bluegills may reach 12 inches in length.

The pumpkinseed is more clown-like in appearance. The body is usually olive with a sprinkling of various colored spots on the sides. Two additional characteristics clearly distinguish it from bluegills. First, iridescent emerald-blue lines radiate from the snout onto the gill cover. Second, the black gill-cover flap has a bright-red or orange spot on the tip. In a few waters, pumpkinseeds grow as large as big bluegills. However, big “seeds” are rare; most fishermen will never catch a pumpkinseed longer than eight inches.

Longears, as their name implies, have long gill-cover lobes.



Dredal ower anfish

Longears may sport colorful gill cover streaking similar to pumpkin-seeds, but on longears the ear flap is fringed in white instead of red. This species is not common in Pennsylvania.

The redbreast sunfish is more likely to be found in streams and rivers of the Atlantic drainage than impounded water. It has a long gill-

cover lobe, similar to the longear. However, the redbreast has an all-black ear flap without a color border. Compared to a bluegill, the redbreast has a large mouth. It may reach 12 inches in length.

Redear, called "shellcracker" down South, may be found in some Pennsylvania farm ponds where they were stocked because they are not as prolific as bluegills and have better growth potential. Once again, the gill flap distinguishes the redear from other sunnies; the black gill-lobe is edged in red. This ear flap tip is the same color as a pumpkinseed's ear flap, but the redear does not have the iridescent facial bars.

Although native to Pennsylvania, the green sunfish is rarely encountered by anglers. It is not as colorful as its cousins—it's brassy olive over the entire body. Compared to other sunfish, the green sunfish has a large mouth, extending beyond the eye—resembling a rock bass. The black ear lobe, however, is trimmed with a dot of yellow-orange. Green sunfish are small but aggressive.

Although not true sunfish, rock bass and warmouth are in the same fish family. Rockies are frequently encountered in the shallows during the late spring and early summer. The body is brassy or olive, with a brownish mottled pattern on the sides and numerous dark dots. Unlike sunnies, the gill-cover lobe of a rock bass has no distinctive color, but is described as looking like a dark smudge. In Pennsylvania, rock bass can grow bigger than two pounds.

The warmouth is the final supporting actor that may surprise a few anglers in some western Pennsylvania lakes. In outward appearance it is similar to a rock bass, but warmouths have a rough patch of teeth on the tongue that can be detected by rubbing the forefinger over the tongue's surface. Rock bass have no rough tongue patch. Also, warmouths usually have three spines in front of the anal fin. Rock bass usually have six. Warmouths inhabit weedy lakes, and rarely grow more than seven inches.

If you didn't memorize the key identifications for each of these little fish, don't worry. Without a color poster and descriptive guidelines in hand, many anglers have trouble telling them apart.

The identification problem is made even more difficult by natural crossbreeding, or hybridization, among true sunfishes. Because all are genetically close, construct their nests in similar habitat and spawn at about the same water temperature, it is not uncommon for species to intermix. The resulting offspring are a hodgepodge of characteristics.

Sunfish quest

When water temperature climbs into the mid-60s, bluegills and pumpkinseeds begin to fill the shallows in preparation for spawning. Spawning habitat for both species is nearly identical, with both preferring sand or fine gravel.

Using their tails, sunfish sweep the silt or weed debris to form a saucer-shaped nest on firm bottom, in the same way as largemouth bass. The redds are about two inches deep and one foot in di-



ameter. Bluegills tend to spawn in tight colonies, while pumpkinseed nests are spread farther apart.

Nesting may take place almost anywhere the water is less than three feet deep—cuts, coves, marina basins, the shallow lip of main-lake shorelines, or even midlake shoals. The greatest concentrations of nest sites are on protected shallow flats, usually in large bays.

According to the scientific literature, bluegills and pumpkinseeds spawn at slightly warmer temperatures than bass. However, it is not uncommon to find bass and sunfish on beds in different areas of the same lake at the same time because of varying water temperature. And don't even be surprised to discover a few late-bedding bass in the same area as early bedding sunfish.

Because sunfish species prefer the same spawning habitat, spawning often occurs in separate waves. When 'gills and 'seeds use the same area, I have noticed the first wave will be bluegills, followed perhaps 10 days later by a wave of pumpkinseeds, followed by another wave of bluegills. Bluegills may spawn periodically throughout the summer; pumpkinseeds typically spawn only once.

When fishing over sunfish on the nest, you need precise casting. Nesting fish will not leave the redd to chase a lure or bait. However, they can be temporarily driven off a redd by a noisy, sloppy cast.

Not all sunfish are on the redds at the same time. In the same area there will be bluegills or pumpkinseeds that are preparing to spawn, as well as ones that have already spawned. Fish not on redds are more willing to chase a lure or respond to a less than perfect cast.

Belly boat tips

From late May to early July, a float tube puts you where the action is, and it does so without spooking sunfish like wading or fishing from a boat. A three-foot donut with two legs dangling through the center apparently is not as threatening to sunfish as the shadow of a big boat. And waders, of course, may unintentionally walk through colonies of bedding sunfish, destroying nests.

There is a variety of inflatable belly boats on the market. Although a bit awkward to get into, I prefer the oval-shaped float tube as opposed to the U-shaped devices. There is something about being completely surrounded by a flotation chamber that provides a more secure feeling. Furthermore, I strongly encourage spending a few more bucks to get a deluxe 22-inch tube model rather than a 20-inch model.

When it comes to the method of propulsion, I'm perhaps at odds with the majority of belly boaters. Most tubers choose the flipper-style foot fin because you can achieve greater speed

with them, but you move backward. I prefer to see where I am going without twisting my neck, so I chose duck fins, which allow forward movement simply by taking steps.

The compartments in a float tube have more than enough room to hold a few small storage boxes, a snack, and a compact autofocus camera. If my plans call for a fish fry (one of the main reasons I go after panfish), then a collapsible floating fish basket is attached to one of the D-rings of the tube with a short rope.

Tackle tactics

Panfishing allows considerable flexibility in rod and reel combos. It's possible to use almost any outfit, and still manage to catch some fish. However, in terms of both efficiency and fun, I recommend ultralight spinning outfits.

An ultralight spinning outfit should be capable of comfortably handling 1/32-ounce and 1/16-ounce lures on line ranging from 2-pound test to 6-pound test. The most common ultralight spinning rod is 5 1/2 feet, but I don't even own one that short. I prefer longer rods, from 6 feet to 9 feet, with the longest rods favored for bobber presentations.

Catching bedding panfish requires a very small bait (typically weighing less than 1/32-ounce) to enter the area of a redd quietly. A bobber, or float, has a number of advantages when fishing shallow-water sunfish. First, a bobber provides weight for casting almost weightless jigs and baited hooks. Cast beyond the redd and slowly swim the lure onto the nest. Second, a bobber keeps the bait suspended just off the bottom to prevent the hook from snagging the stringy moss found in the shallows at this time of year. A suspended bait is also more visible to the fish. Finally, a bobber acts as a strike indicator to let you know when a sunfish has actually taken the bait. This is very important when fishing from a belly boat where you don't have a high angle of view to observe the fish picking up the bait.

For sunfish, the best float-and-lure combination choices include a micro split-tail on a jighead, ice dot spoon or similar tiny tidbits. For guaranteed results, tip each lure with one or two squirming maggots.

Of course, fly rodding opportunities also abound at this time of year. When targeting bedding sunfish with a fly rod there is no need for a bobber. The same micro baits described above can be used.

What about those panfish not on the nest? They may be shadowing redds, roving the shallow flats, sitting tight to stumps and brush, or holding at the edge of slightly deeper cover—in other words, they may be almost anywhere. You need to pinpoint the preferred sites each time you go fishing because location changes occur under different weather and water conditions.

You can use a wider variety of lures with prespawn and postspawn 'gills and 'seeds that are willing to chase a meal. Baits suspended below a float still work, but so do all sorts of little jigs and spinners. Stick with 1/32-ounce or 1/16-ounce jigs. Spinners must be tiny, too, in sizes 0 and maybe 1. Retrieve them slowly.

Want to go after the eye-popping bluegills? Try the smallest size floating-minnow lures. The technique was demonstrated for me by a fishing buddy a couple of seasons ago. Simply twitch the 1/8-ounce offering on the surface, just as bass anglers do with the larger sizes. The jointed model has a higher hooking percentage than the straight-body model, apparently because the tail section tangles below the surface.

My favorite fly rod presentation is the rubber-leg sponge spider.

In very shallow water, bedding sunnies almost always rise for the spider. Over deeper beds, however, the fish often ignore something on the surface. But it's still possible to catch plenty of roving sunfish on a spider in the evening just as the sun is holding on the horizon.

What about the other supporting sunfish species? All these fish can be readily caught with the same methods and baits that work for bluegills and pumpkinseeds.

During June, that bridge month from late spring to early summer, sunfish are swarming the shallows. A belly boat can put you into the thick of things, perhaps bringing back past memories, as well as creating new ones.

ANGLER

Quiet Waters in the Northwest

Here is a list of favorite northwestern sunfish waters where belly boating for panfish are highly recommended.

- **Eaton Reservoir, Erie County.** This 246-acre water supply reservoir for the city of North East is electric motors only. With an aeration system that helps limit weed growth, the lake is perfect for belly boating in early summer. Very large bluegills have been reported from this water over the years.

- **Pleasant Lake, Erie County.** This 60-acre bog lake has a complete restriction on motors of any kind. There is a Commission cartop access on the lake. Although not known for exceptionally sized sunfish, the lake attracts anglers because of its near-pristine nature. The Western Pennsylvania Conservancy recently acquired surrounding land to help protect this unique natural lake.

- **Tamarack Lake, Crawford County.** At 526 acres, Tamarack is the largest Commission lake. It is restricted to electric motors only. Some tubers may be turned off by the amount of vegetation, which might impede mobility at times. Regardless, the lake has an excellent panfish population.

- **Crystal Lake, Crawford County.** This 60-acre pothole lake is part of a massive wetlands on Game Lands 214. No motors of any kind are permitted. It is a very interesting lake, with little development along the boggy shoreline. This lake has a population of warmouth, in addition to sunnies. Besides the pad beds, the shoreline area has submerged brush, which could puncture a tube. The open waters of the lake are unobstructed.

- **Upper End of Lake Wilhelm, Mercer County.** A portion of Lake Wilhelm west of Interstate 79 is part of Game Lands 270, so no motors are permitted. The upper end of this reservoir is shallow, vegetated, brush-filled and spilling over with big bluegills. Because of the number of underwater snags, tubers should exercise caution. Also, keep an eye out for friendly water snakes, which love to crawl onto surfaces to sun themselves!

- **Justus Lake, Venango County.** This 144-acre lake is the centerpiece of Two Mile Run County Park. Only electric motors are permitted. Even though the lake is very popular, the many boats under electric motor power do not pose a problem for belly boat anglers who fish the edges and the shallow flat at the north end.

- **Kahle Lake, Venango/Clarion counties.** Boats are limited to electric motors on this 253-acre Commission lake. It is not as busy as Justus Lake (about 25 minutes away), but it features a fine panfish population.

- **Other good spots.** Do not overlook the many farm ponds and old water-filled strip pits that dot the northwestern Pennsylvania landscape. Permission must be obtained from the landowner before fishing waters on private land.—DB.

GPS

is No Gadget!

by Curt Garfield

In one of the many sinuous back bays of Lake Wallenpaupack in northeastern Pennsylvania, there is a certain underwater grass bank that yields bass after bass on topwater baits early in the morning. It wasn't the easiest place in the world to find, but all that's changed now, thanks to a gadget called the Global Positioning System, or GPS, for short.

Actually, calling GPS a "gadget" is selling a pretty sophisticated system way short. It was developed by the military well before Operation Desert Storm as a navigational aid and aiming device for bombs and rockets. It has been fine-tuned to the point at which it will soon be the primary guidance system for our commercial airliners.

When operating at full power with selective availability (more on that later) turned off, GPS is incredibly accurate. It can "remember" a location, such as that grass bank in Lake Wallenpaupack, and bring you back within five meters of it time after time. Bass pro Kevin VanDam used it to locate productive grass banks in the middle of Lake St. Clair. Kevin Wirth used a GPS unit to locate and re-locate an 18-foot-deep underwater ditch that produced enough bass to win the 1994 B.A.S.S. South Carolina Invitational at Lake Moultrie.

The ability to take the angler back to that hidden honey hole quickly and accurately is what makes a good GPS unit worth its weight in gold. Even though a GPS won't find the fish-holding structure for you, it can ensure that you have to find that cover only once. And when you're ready to call it a day, GPS can get you back to the ramp by the shortest possible route.

How it works

Just what is GPS all about and how can



it help you find fish? Anybody who watched Operation Desert Storm unfold on television five years ago got a first-hand view of just what GPS can do. Those bombs that were dropped down ventilating shafts and through doors of military targets were all guided by GPS. The target had been scouted and its precise location fed into a GPS unit in the aircraft. That unit fed navigational information first to the pilot and later to the missile itself.

Unlike Loran C, the system GPS replaces, GPS does not depend on chains of radio transmitters to function efficiently. Instead, each GPS unit gets its bearings by tuning in to a constellation of 24 Department of Defense satellites circling in six separate orbital planes 11,000 miles above the earth. This means that a properly programmed GPS receiver can tell you precisely where you are, and show you how to get to where you want to be, anywhere on or above the face of the earth.

Each GPS satellite carries four very accurate atomic clocks that transmit the time continually in the 1200 to 1600 MHz frequency range. By receiving and comparing that time with a clock of its own, the GPS receiver can determine precisely just how far away that particular satellite is at any given time. By doing this with three or more satellites at once, and using a built-in triangulation program, the unit can pinpoint your location within less than 50 feet anywhere in the world. If it can read four or more satellites at once, it can provide your altitude as well.

How to use it

But what's more important to the angler is that these new GPS units can be instructed to "remember" up to 1,000 specific locations, or "waypoints." These waypoints can be anything from hidden fish-holding structure to buoys, boat ramps and campsites. Simply select the one you want to visit and the unit will provide course instructions to that destination, tell you how long it will take to get there, and read out your speed along the way. The new battery-powered, hand-held units are even capable of getting you back to your motel without getting lost!

Features vary from model to model, but most units calculate cross-track error, provide latitude and longitude coordinates, range and bearing of your destination, speed and course over the ground, time to go, ETA, and distance made good. Prices for most hand-held units suitable for anglers



range from a top end of \$1,029 to \$200 or less.

Because the unit stores the latitude and longitude of each waypoint, it's easy to transfer information from the machine to a topographic or hydrographic map or chart once you're back home to get a better overall picture of your fishing area. You can even pass accurate information on that honey hole or brush pile to a faraway fishing buddy over the phone. By plugging your numbers into his GPS, he'll be able to get to that spot as if you were right there showing him the way.

Purchasing tips

Buying a GPS is no different from buying a car or truck. You obviously want to find a reputable dealer who stands behind the product and you must realize that there are tradeoffs involved. For instance, even though hand-held units have the same capabilities as fixed mounts, they are more likely to be lost, dropped or damaged. A fixed-mount unit also has the advantage of leaving the angler's hands free to do other things while still watching the screen.

When it comes to memory storage, go for as much as you can afford. Units with bigger memory capacity cost more, but they have more features, such as the capability of saving the location of a waypoint with the touch of a button as you pass by, and the capability to return to that waypoint, again with a single touch of a button. Also,

be sure that the unit you're considering retains its memory when the power is turned off.

A GPS receiver has to receive information from four satellites to provide an accurate fix. Some of the less expensive models do this by sequencing from one satellite to another using just one channel and are much slower and less accurate than "continuous" receivers that can monitor four or more channels simultaneously and produce almost instantaneous position and velocity. These come in either four-, five-, eight- and even 10- and 12-channel configurations. As with memory, expect to pay more for receivers with more channel capabilities.

Your unit should be easy to install with mounting options that work on boats of all sizes. It should be weatherproof and should be backed with at least a one-year warranty and a proven service policy. If it has a tracking function, ask if the maps are built into the machine or if they have to be purchased separately as cartridges.

Selective availability

There is one fly in the GPS ointment. The federal government, which has invested \$10 billion in the system and another \$1 billion to operate and maintain it, made the decision early on to create separate transmission codes, one for military use and one for civilian use. The idea was that the civilian code would not

GPS is No Gadget!

be as accurate as the military one, thus preventing hostile enemy strikes using our own navigational system.

After the civilian code was released, it still provided 15-meter to 25-meter accuracy, far better than what was intended. Consequently, the military built in a deliberate accuracy degradation called Selective Availability (SA), which it can turn on or off at will.

What it amounts to is that with SA turned on, most GPS units are accurate within 100 yards of a waypoint. With SA off, the accuracy becomes five yards or less. To compensate for this fluctuating accuracy, the U.S. Coast Guard developed Differential GPS (DGPS).

Differentially corrected GPS receivers use a signal transmitted by a land-based tower to correct the error of SA. The only problem with DGPS for the fisherman is that the extra equipment needed to use it is expensive, and many inland areas aren't covered.

That's the bad news. The good news is that boating and fishing groups are lobbying hard to get the Department of Defense to turn SA off and leave it off, and the chances are good that this will happen.

Whether your fishing is confined to smaller lakes, streams and rivers with lots of bays and creeks, or to big lakes and reservoirs, GPS can help you find those hidden spots and leave a trail of electronic bread crumbs to follow back home.



GPS Manufacturers

Eagle Electronics, P.O. Box 669, Catoosa, OK 74015-0669.

Furuno U.S.A. Inc., P.O. Box 2343, So. San Francisco, CA 94083 (415) 873-9393.

Garmin, 9875 Widmer, Lenexa, KS 66215 (800) 800-1020.

Interphase, 1201 Shaffer Road, Santa Cruz, CA 95060; (408) 426-2007.

Lowrance Electronics, 12000 E. Skelly Drive, Tulsa, OK 74128-2486; (918) 437-6881.

Magellan, 960 Overland Court, San Dimas, CA 91773; (909) 394-7054.

Panasonic, One Panasonic Way, Secaucus, NJ 07094; (201) 348-7295.

Ray Jefferson, 4200 Mitchell Street, Philadelphia, PA 19128; (803) 394-8988.

Raytheon, 676 Island Pond Road, Manchester, NH 03109; (603) 647-7530.

SI-TEX, P.O. Box 6700, Clearwater, FL 34618; (813) 535-4681.

Techsonic Industries Inc., 3 Humminbird Lane, Eufaula, AL 36027; (205) 687 6613.—CG.

GPS Words

Acquisition Time: The amount of time required for a GPS unit to lock on to three satellites and provide a "fix" on its current position.

Bearing: The direction, expressed in degrees relative to your boat's heading, of another vessel or point of interest.

Cold Start: After a long period of non-use or if your receiver has been moved a considerable distance from its last operating location, the receiver will have no idea where to look for satellites in orbit and will attempt to locate them one at a time. This random search may take up to 20 minutes before the receiver is fully functional.

Course: The direction in which your boat is traveling expressed in degrees from north. This may be different from the direction your boat is pointing.

DGPS: Differential GPS. A technique involving transmission of a corrected signal from a fixed land point to offset inaccuracies during time periods when Selective Availability is turned on.

Event: A location where something significant took place, such as catching a large fish. Some GPS receivers with a plotter function are able to mark event locations with a distinctive symbol.

GPS: Global Positioning System. The U.S. Government-funded system of satellites that provides extremely accurate positioning information.

Heading: The direction your boat is pointing expressed in degrees relative to magnetic north. Heading may be different from the direction you are traveling if wind and currents have some effect.

Icon: A graphic symbol that can be placed on the plotter screen to represent an event or specific item of interest to the user. Also called an "Event Marker."

Latitude: Angular distance measured from the equator, which forms lines of latitude. The Equator is 0 degrees latitude, the North Pole is 90 degrees north latitude, and the South Pole is 90 degrees south latitude.

Longitude: Angular measurement

perpendicular to the Equator measured from the Greenwich meridian. There are 360 degrees of longitude, 180 degrees to the west of the Greenwich meridian and 180 degrees to the east. Lines of longitude are equally spaced at the equator but converge to a single point at the north and south poles.

Magnetic North: The natural magnetic pole of the Earth. This point is continually moving over time and differs from true north by several hundred miles. This is the point to which all magnetic compasses point.

Magnetic Variation: The difference in angle between true north and magnetic north from any given position on the earth's surface. Zero degrees variation means that magnetic north and true north are directly in line with each other.

MOB: Man overboard. A feature on many units that instantly records the boat's position at the touch of a button and plots a course to return to that spot.

Nautical Mile (Knot): Unit of distance. One nautical mile equals one minute of latitude, or about 6,000 feet. A statute mile is 5,280 feet.

Route: A series of waypoints stored in a GPS or Loran C receiver.

SA: Selective Availability. The ability of the U.S. Government to alter the GPS signal and adversely affect positioning accuracy for reasons of national security.

True North: The northern point of rotation of the earth. This is the point where all lines of longitude converge in the northern hemisphere. It has a latitude of 90 degrees north.

Warm Start: A condition occurring when the GPS receiver is powered up. It first assumes it is in the same position as when it was last used and will start searching for satellites according to the data stored in its memory. A warm start produces an accurate position fix within five minutes.

Waypoint: Any point of interest to the user can be a waypoint. Most GPS units have the capability of storing many points (sets of lat/lon numbers), which may represent turning points when included in a route, points of interest such as structure, or destination point of origin. The user can usually enter these position numbers manually from a chart or store his present position automatically. Some GPS units allow the user to number, name and attach a graphic symbol to waypoints. (See "Event").—CG.

Southwest Pennsylvania Trout Streams

by Charles R. Meck



*Youghiogheny River
below Confluence*



Stonycreek River near Johnstown

“So much has been said and written about the great fly fishing on Spruce, Spring, Fishing, and Penns creeks, and the Little Juniata River. Because of that, many of our local streams here in southwestern Pennsylvania have been overlooked by anglers.” That’s how Paul Miller, of Connellsville, and a long time resident of southwestern Pennsylvania, feels about the streams in his area. “We have some great fishing opportunities in Westmoreland, Bedford, Somerset, and Fayette counties. Some winding mountain roads make many of the better streams almost inaccessible,” Paul said recently, as we toured many of his favorite trout waters.

Paul should know—he’s fly fished over 30 years on area streams and rivers. Paul knows the streams well in southwestern Pennsylvania—and he’s fly fished just about all of them. His favorite—an overlooked gem—is Meadow Run.

The trout streams and rivers of southwestern Pennsylvania have concerns other than the difficulty in reaching them. Look at the Casselman or Youghiogheny rivers, or fish Dunbar or Coxes creeks. These and other waterways have problems to varying degrees with acid mine drainage. Until these discharges have been totally suppressed, some of the waters of the southwest will not reach their full potential as topnotch trout waters.

Paul Miller and Chuck Furimsky have fished just about all of the southwestern streams, so I asked them to give me their top 10 streams in the areas: Yellow Creek, Bedford County; Loyalhanna Creek, Westmoreland County; Laurel Hill Creek; Youghiogheny River; Little Mahoning Creek; Mill Run; Wills Creek; Stonycreek River; Whites Creek; and Meadow Run.

Meadow Run

Paul Miller and Chuck Furimsky, of nearby Rockwood, recently took me to Meadow Run for a day of fly fishing. This Fayette County trout stream flows northeast and enters the Youghiogheny River near Ohiopyle. As Paul, Chuck and I approached this stream in mid-May, we noted a handful of March browns appearing in

the fast water. In two more weeks this stream would host the annual green drake hatch. When this large species appears on this small stream trout feed voraciously on the hatch. Paul assured me that trout actively feed on the green drake.

Before I had even rigged up my fly line, I looked upstream and saw Chuck land a heavy Meadow Run rainbow. Within the next couple of minutes Chuck landed another trout. Paul, Chuck and I fly fished Meadow Run for the better part of a morning and never once saw another angler on the stream. The Bead Head Pheasant Tail worked well on Meadow Run that May morning.

You can reach Meadow Run just south of Ohiopyle off PA 381.

Youghiogheny River

Another potentially great stream is the Youghiogheny River. Recent times haven’t been kind to this water that some call “the Madison of the East.” One of its tributaries, the Casselman River, recently received its first planting of trout, and local anglers began to rave about the potential for this river. Then, a couple of years ago, several heavy April storms pushed acid from abandoned mines into the Casselman once again. The mine acid flowed into the Youghiogheny River just below the dam and deteriorated the quality of this large river. The Youghiogheny is just beginning to recover from this episode. It will take several years for the Casselman River to recover.

Did this mine acid episode affect the hatches on the river? You bet it did. Ron Dorula, a fly tyer and fly fisher from nearby Uniontown, began seeing green drakes on the Youghiogheny a few years ago. In fact, he fished over trout actually rising to the hatch. That occurred before the mine acid spill. Ron had seen few green drakes since that event.

Recently I fished the Youghiogheny River with Craig Chelske and his son. We picked one of the hottest days of the summer to fly fish this recovering stream. When I checked the water temperature on this tailwater, I recorded a 62-degree reading. On one of the hottest days of the summer—in the middle of

the afternoon—the Yough registered a comfortably cool reading. During that hot July day we caught rainbows on the river on a Bead Head Pheasant Tail Nymph.

You'll find plenty of caddis hatches on the river. They begin early in the season and continue into fall. Mayfly hatches, although diminished because of recent acid problems, begin in May and continue through much of the season. You'll find some sulphurs, a few green drakes, slate drakes and yellow drakes. Slate drakes appear in July and again in September.

The Yough has a lot going for it, like cool water temperatures and a good flow all summer long. It has the potential to become one of the top streams of the East. However, until it rids itself of some of its mine acid drainage it will not be the "Madison of the East."

Several interested anglers recently formed the Chestnut Ridge Chapter of Trout Unlimited in Uniontown. This chapter, along with the Pennsylvania Fish and Boat Commission, has devoted much of its energies to restoring this great river and making it one of the top in the state. They need your support in this effort.

You'll find the best fly fishing on the Yough from Confluence downriver to Ohiopyle. Paul Miller fishes the river down to Connellsville. He prefers fly fishing the area some refer to as "the middle section" a few miles below Confluence. Don't worry about angling pressure. It's a huge river and you'll see few others fishing it.

Loyalhanna Creek

Flowing through Ligonier and Latrobe anglers will find Loyalhanna Creek. I'll never forget a time I fished this stream. Russ Mowry, Ken Igo, Tim Shaffer and I fished the Delayed-Harvest area near Ligonier in late March. A few stoneflies appeared on the surface, but no trout rose. As I looked downstream Ken caught one trout after another. Not one of a half-dozen anglers around us caught any trout, while Ken continued to land one after another. I had enough and asked Ken to show me the fly he was using. Guess what? That was my first introduction to the Green Weenie. Don't ever fish that stream without that pattern.

I revisited the stream just recently with Paul Miller and Chuck Furimsky. Paul said that the stream has a good holdover population. In a few hours of fly fishing in early May, Paul, Chuck and I caught and released a dozen trout. In the middle of an urban setting the Loyalhanna continues to thrive, and it holds a good number of trout.

Yellow Creek

"I consider Yellow Creek one of the most productive streams of the southwest," Paul Miller said. With its limestone flow and heavy hatches of mayflies and caddisflies, no wonder he and hundreds of other southwestern fly fishers like this stream. Visit Yellow Creek just north of Everett in mid-May to late May and you'll see anglers lining the banks. Around May 20 this

fertile limestone stream comes alive with two famous hatches—the green drake and the sulphur. Visit the stream then and you'll have difficulty locating a place to fly fish, especially in the Delayed-Harvest section. Fish the meadow below the special project water and you'll see a good drake hatch and few anglers with which to contend.

Yellow Creek lost its green drake hatch in the mid-1950s. The hatch returned to the stream in the late 1970s. Yellow Creek now holds an impressive hatch with great fly fishing for nearly a week.

Yellow Creek, as its name implies, often seems a bit off-color. But don't let that fool you—it holds a good number of trout and excellent hatches much of the season.

Little Mahoning Creek

Just north of Indiana, near Rochester Mills, you'll find another good trout stream, Little Mahoning Creek. Active strip mining nearby threatens this fine stream, but it still holds some good mayfly hatches. The Little Mahoning is one of a handful of streams in the state that boasts the three major drake hatches—the green, brown and yellow.

Last October, Andy Miloser of Glen Campbell and I fly fished on the more than four miles of Delayed-Harvest, Fly-Fishing-Only section. Andy has fished the Little Mahoning for decades and knows the stream well. Andy still vividly remembers the day he caught a heavy 18-inch brook trout on a streamer. He pointed to a boulder-laden pool and said that his son, John, caught a 22-inch brown trout there. After one of the most severe summers in recent years with plenty of hot days and little precipitation, Little Mahoning Creek was only a shadow of what it looks like in spring. In spite of this devastation Andy and I caught trout in just about every heavy riffle

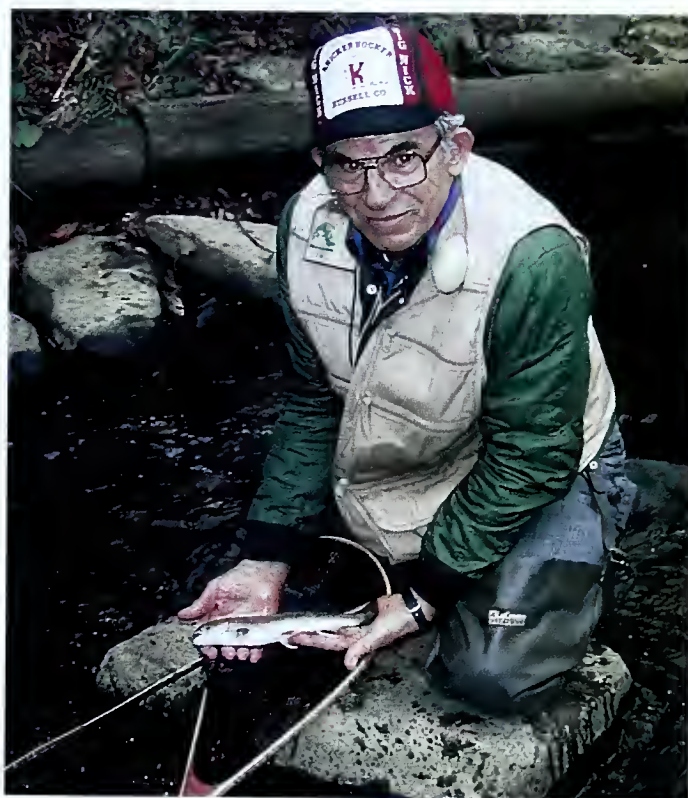
we fished. Trout had survived the severe summer.

Patterns like the Green Honey Bug and the Green Weenie work well on the Little Mahoning. The Bead Head Pheasant Tail Nymph also catches plenty of trout on this stream.

You'll find a four-mile Delayed-Harvest, Fly-Fishing-Only section on the stream just upstream from Rochester Mills.

Laurel Hill Creek

I've opened many of the Pennsylvania trout seasons on Laurel Hill Creek back in the 1960s. I've fished opening day in snowstorms on this high-elevation stream. You'll find some good hatches and trout fishing especially in its upper reaches. You'll find more than two miles of Delayed-Harvest water just above Laurel Hill Lake. You can reach the stream off PA 31, about seven miles west of Somerset. Laurel Hill hatches begin in April with some hendricksons and little black caddisflies. In May you'll find gray foxes and sulphurs. Jones Mill Run, a tributary to Laurel Hill Creek, even holds a population of green drakes.



Southwest Pennsylvania Trout Streams

Wills Creek

Wills Creek reminds me of a Western stream. It falls rapidly until it reaches Hyndman on PA 96. If you enjoy fishing a stream with plenty of riffles and steep ravines then you'll enjoy fishing Wills Creek. Paul Miller was right in one aspect—this stream gets little attention.

A heavy rainfall nearly 10 years ago devastated Wills Creek. You can still readily see the scars from this flooding on the stream today.

Wills holds many great hatches like the green drake, sulphur and slate drake. The best fly fishing on Wills occurs in late May and early June. Don't overlook this relatively undiscovered trout stream.

Stonycreek River

If you talk about recovering rivers and rivers that have great potential as trout hotspots in southwestern Pennsylvania, then you've got to include Stonycreek River just south of Johnstown. Through the efforts of people like Len Lichvar of nearby Boswell and a group called SCRIP (Stonycreek-Conemaugh River Improvement Project), this river has returned to a viable trout stream. Much acid mine drainage has yet to be eliminated, but with this group and others the river will return.

Stonycreek holds good temperatures throughout the summer and mayfly hatches have begun to appear. In June you'll find the giant stoneflies hovering just above the surface and a good hatch of light cahills. In June and again in September you'll see some slate drakes on this water.

What about other southwestern streams like Dunbar Creek just south of Connellsville, Clear Shade Creek near Windber, and Bobs Creek north of Bedford? Clear Shade and Dunbar



creeks have some minor problems with acid mine drainage. Bobs has holdover trout and Clear Shade holds a good brown drake hatch around the end of May. The drought of the summer of 1995 devastated Bobs Creek. Before that this small stream held a good number of native brown and brook trout. It will take some time for this small stream to recover fully from the effects of that summer-long dry spell.

Hatches

As the season begins in the southwest, hatches like quill gordons and blue quills appear on Wills, Brush and Bobs creeks. These hatches can last for well over a week appearing every afternoon for more than two hours.

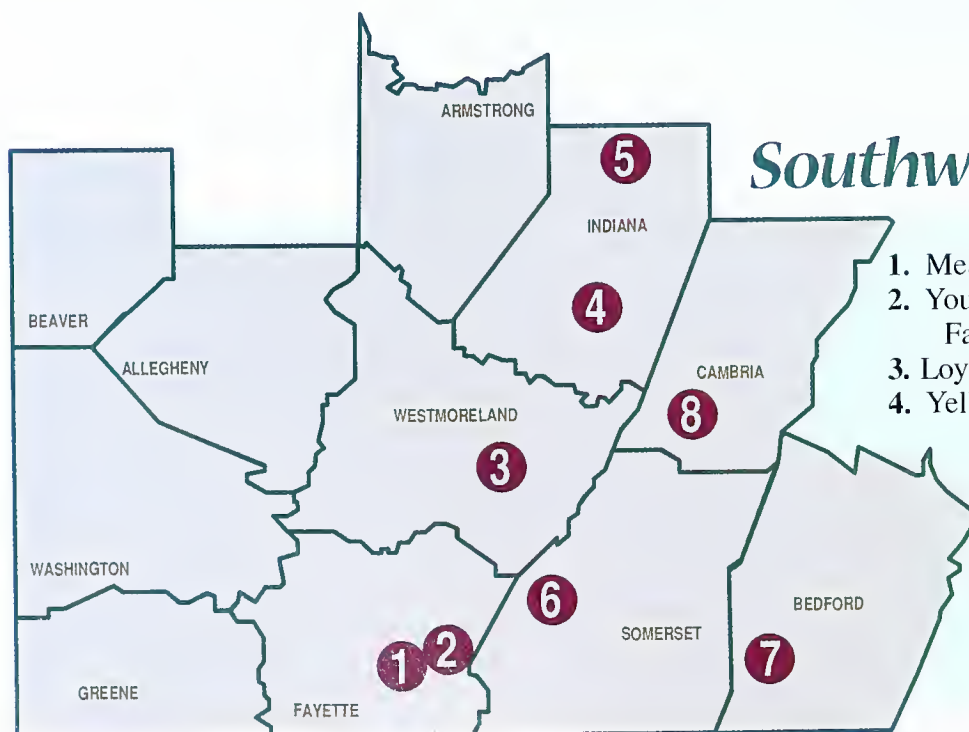
As mid-May approaches many of the better waters hold March brown and great sulphur hatches. Laurel Hill, Wills and Loyalhanna creeks harbor good hatches of sulphurs.

Surprisingly, you'll find green drake hatches on many southwestern trout streams. From the small Jones Mill Run to Meadow Run, Wills Creek, Brush Run, and Yellow Creek, mid-May and late May harbor some great green drake matching-the-hatch opportunities. Don't overlook this hatch when fishing these waters.

You can even find tricos on some of the southwestern Pennsylvania trout streams. The upper end of Yellow Creek just below Woodbury boasts a trico hatch from mid-July through September.

Next time you're in the southwestern part of the state try one of the many good trout streams. Sure, some of them have problems with acid mine drainage, but many of these waters hold good populations of aquatic insects and trout. After you've fished them you might agree with Paul Miller that southwestern Pennsylvania holds a lot of undiscovered trout gems.

ANGLER



Southwest PA Trout Streams

1. Meadow Run, Fayette County.
2. Youghiogheny River, Confluence to Ohiopyle, Fayette County.
3. Loyalhanna Creek, near Ligonier, Westmoreland County.
4. Yellow Creek, just north of Everett, Indiana County.
5. Little Mahoning Creek, at Rochester Mills, Indiana County.
6. Laurel Hill Creek, west of Somerset, Somerset County.
7. Wills Creek, at Hyndman, Route 96, Bedford County.
8. Stonycreek River, at Johnstown.



Pennsylvania Fish & Boat Commission

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Laurie E. Shepler Named New Assistant Counsel

Laurie E. Shepler, 1992 graduate of The Dickinson School of Law and 1986 graduate of Penn State, has been named the Commission's new Assistant Counsel. Her duties include working with Chief Counsel and Deputy Executive Director Dennis Guise on a variety of legal issues. Specifically, Ms. Shepler is responsible for reviewing contracts, drafting regulations, representing the Commission before various administrative agencies, such as the State Civil Service Commission and the Environmental Hearing Board, and advising the Commission's staff on legal matters.

Ms. Shepler's background includes extensive legal research and writing. She previously served as a judicial clerk for the Honorable Sandra Schultz Newman and the Honorable Madaline Palladino of the Commonwealth Court of Pennsylvania.

Newest Great Lakes Invaders: "Round Gobies"

Lake Erie will soon be home to another foreign invader. The round goby (*Neogobius melanostomus*) was discovered in 1990 in the St. Clair River, the channel connecting Lake Huron and Lake St. Clair. This species comes from the Black and Caspian seas, the same area where zebra mussels come from, and scientists believe ballast water discharged by transoceanic vessels carried them here, the same way zebra mussels arrived.

Gobies are members of a family of fish distributed worldwide in both saltwater and freshwater. Before 1990, they were not found in the Great Lakes. In 1993 round gobies were discovered in other waterways, and the probability of their extending to the Mississippi River drainage has raised concerns over the potential effects on North American native species and ecosystems.

Round gobies live on the bottom of waterways and perch on rocks and other substrate. As adults they can reach lengths of about 10 inches. Gobies have big heads, soft bodies, and no spines on their dorsal fins; they look like big tadpoles. Their unique characteristic is that the pelvic fins are fused, forming a suction disk. This suction disk helps them anchor to objects on the bottom. Young round gobies are slate-gray. Bigger gobies have black and brown patches over their bodies.

Zebra Mussels: Not All Bad?

Those nickel-sized mollusks zebra mussels have been labeled the scourge of the Great Lakes system after they clogged power plant intakes and water treatment facilities. But they may have a good side, according to a scientist in Penn State's College of Agricultural Sciences.

"A few years ago, I thought it was only a matter of time before zebra mussels infested inland lakes in Pennsylvania," says Dean Arnold, adjunct assistant professor of aquatic ecology in the School of Forest Resources. "But that hasn't happened, which is surprising because mussels can travel easily to new waters by attaching themselves to trailers and boats."

Arnold has sampled waterways such as the Juniata River and the main stem of the Susquehanna River as part of the Pennsylvania Zebra Mussel Watch Program. He says few Pennsylvania lakes and rivers have seen invasions of the mussel. "Lake Erie has a huge population of them and the Allegheny and Ohio rivers have reported invasions," he says. "Otherwise, nature seems to be holding them in check, although if you go to places where they've established themselves, it doesn't look that way."

In fact, there seems to be an up side to zebra mussels, which are named for the alternating light and dark bands on their shells. Each adult mussel is a highly efficient filter feeder, siphoning microscopic plankton and other plant and animal life at the rate of one liter of lake water a day.

"They make a tremendous impact on water clarity, which makes the water more attractive for human use," Arnold says. "The filtration also means there are fewer large fluctuations in lake nutrients to promote outbreaks of algae growth, leading to better visibility for predator fish."

Arnold points out that the zebra mussels' muscular filtration talents also help public water systems, which have to filter out impurities from water before supplying it to consumers.

Not surprisingly, these good points also carry some less desirable baggage. The zebra mussels' efficient filtering

leaves less food for native filter feeders and larval fish. Zebra mussels also crowd on rock reefs, which are prime spawning sites for lake gamefish, such as walleyes. "You don't want to wade barefoot in an area where zebra mussels are," Arnold says. "Their small shells are very sharp."

In the decade since biologists discovered zebra mussels in the Great Lakes system in 1986, the problems caused by the mischievous mollusk have been well-documented. Water treatment and power plants have had their intake pipes clogged because zebra mussels are attracted to flowing water. Clean-out fees can reach \$6 million every year along Lake Erie. The mussels can attach themselves anywhere, including boats, boat engines, rocks, other zebra mussels, and most importantly, other native mussels and clams.

"Zebra mussels quickly become much more numerous filter feeders than native species," Arnold says. "So the native species are out-competed for food. Meanwhile, the buildup of zebra mussels on the shells of the native species makes it difficult for them to move and makes them more susceptible to damaging wave action."

However, Arnold points out that so far, the dire predictions of lakes and ecosystems ravaged by zebra mussels have not come to pass, and that these mollusks have not been established in the United States long enough to document negative or positive long-term effects. "In biological terms, 1986 is really not that long ago," he says. "And some equilibrium may be developing."

He says that researchers have shown that zebra mussels are eaten by certain breeds of ducks and a few lake fish, such as the freshwater drum. More importantly, the evidence suggesting that zebra mussels have a long-term adverse effect on the aquatic food chain, or on fish production, is not yet conclusive.

"New invaders into an ecosystem really shake things up, and some introduced species really change things," Arnold says. "But by and large, biological systems adapt to new species."

Commissioner Moore Receives Limestoner Award

Commissioner Enoch "Inky" Moore recently received the Limestoner Award, the highest honor awarded by the Cumberland Valley Chapter of Trout Unlimited. The award is given in recognition for a lifetime of dedication to environmental conservation.

Among his many accomplishments, Commissioner Moore is a past president of the Pennsylvania Chapter of Trout Unlimited and has served on the National TU board of directors. He is also an active member of the Pennsylvania Federation of Sportsmen's Clubs.

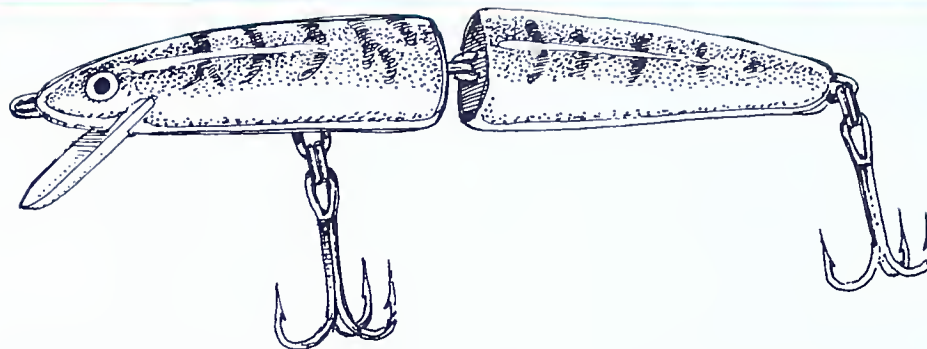


Moore was appointed to the Commission in 1995 by Governor Tom Ridge. He represents Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry and York counties.

Moore chairs the Commission's Legislative Committee.

Commissioner Moore has also assumed leadership roles in the Carlisle Fish and Game Association, Cumberland County Junior Conservation School, Brotherhood of the Jungle Cock, Big Spring Fish and Game Association, and the Cumberland Valley Sportsmen and Conservation Association. His many conservation organization leadership activities have focused on youth education and development.

Angler's Notebook *by Seth Cassell*



When the water is discolored or choppy, use baits that attract the fish by their motions or vibrations. Propeller baits, crankbaits, jointed minnow plugs and spinnerbaits get the job done. When these conditions prevail, don't be afraid to make a hard cast onto the surface. Sometimes the lure's splash attracts fish.

It doesn't take long for dry flies to become water-logged after being used for a few minutes, even when floatant is applied. One simple way of drying the fly is by pinching it in your shirt sleeve. This squeezes out moisture, which is then absorbed by your shirt's fabric. Your fly will then float better and appear more life-like.

Many anglers like to wet-wade during the summer, and who can blame them? Wearing a pair of neoprene waders in 80-degree temperatures is very uncomfortable. Even though you're wet-wading, you can still make use of your wading boots. Simply put on a couple of pairs of socks, and then don your boots along with gravel guards. This is better than wearing an old pair of sneakers because wading boots grip the bottom better and keep gravel out.

Anglers who catch and release fish should consider purchasing a net specially designed for this practice. Regular nets are not tightly meshed, and it is easy for a fish's gills to get caught, possibly

mortally wounding it. Catch-and-release nets have a tighter mesh, making it difficult for the fish to catch its gills in the webbing. They are especially popular for trout fishing, and can be picked up at most sporting goods stores.

Never stop fishing just before sunset, except in areas where regulations require you to do so. Many times, this is the best time to be on the water, especially for surface activity of bass and trout. There is often a brief period of intense feeding just after the sun sets that you won't want to miss. Don't forget to bring a flashlight.

When using spinners for trout, never cast just in front of the fish, because this may spook it or cause it to be suspicious. Instead, cast well upstream, preferably in a riffle where the lure's splash is dampened. Then work your lure to the trout. This approach is much more natural and will result in more strikes.

Beginning fly fishermen often find themselves confused when trying to decide which size tippet to use with a certain size fly. There is an easy rule of thumb that simplifies this problem: Simply divide the hook size by four and the answer is the size tippet that should be used. For example, a size 12 hook would take 3X, and a size 16 hook would take 4X. A size 14 hook could take either, depending on the conditions.

illustration - Ted Walke



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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SMART

Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

How to Make a Largemouth Bass

Anglers know the largemouth by several names, bucketmouth, bigmouth bass or black bass. Biologists know it by its scientific name *Micropterus salmoides*. It is the largest member of the sunfish family or the Family Centrarchidae. The PA state record bass weighs more than 11 pounds.

Each spring, largemouths and other members of this family gather in the shallows to spawn. They spawn at different water temperatures, but they all build and tend nests. Here is how largemouth bass do it.

SPAWNING

Male largemouth bass become mature at around age three. Prompted by water temperatures warming into the low 60s, mature males select a site and prepare a nest. The ideal location is on gravel or sand bottom in one to three feet of water. Once a spot is chosen, the male uses its tail to clear away silt and sand, leaving behind clean gravel. The completed nest is about two feet across and six to eight inches deep. With the nest-building done, the male waits for a female to select him and his nest.

Females hang out in deeper water near the sites while the male selects and prepares the nest. Some females mature at age three but others don't spawn until age four. Each female carries from 4,000 to 82,000 eggs. Shortly after nests are constructed, the females move in. Mature females cruise around, selecting males and nests to lay their eggs.

Males are very colorful at this time. This coloration serves two purposes. First, it makes it easier for fish to tell the males and the females apart. Second, it attracts the females. This coloration may be some indication of just how good a male's genes are. Most females deposit a few hundred eggs at a time in several nests. With her eggs in several different nests, she ensures the survival of at least some eggs.

GUARDING THE NEST

Not only does the male build the nest, but he guards the eggs and later,

the young fry. Bluegills and baitfish feast on the eggs and young fry. The male is aggressive and

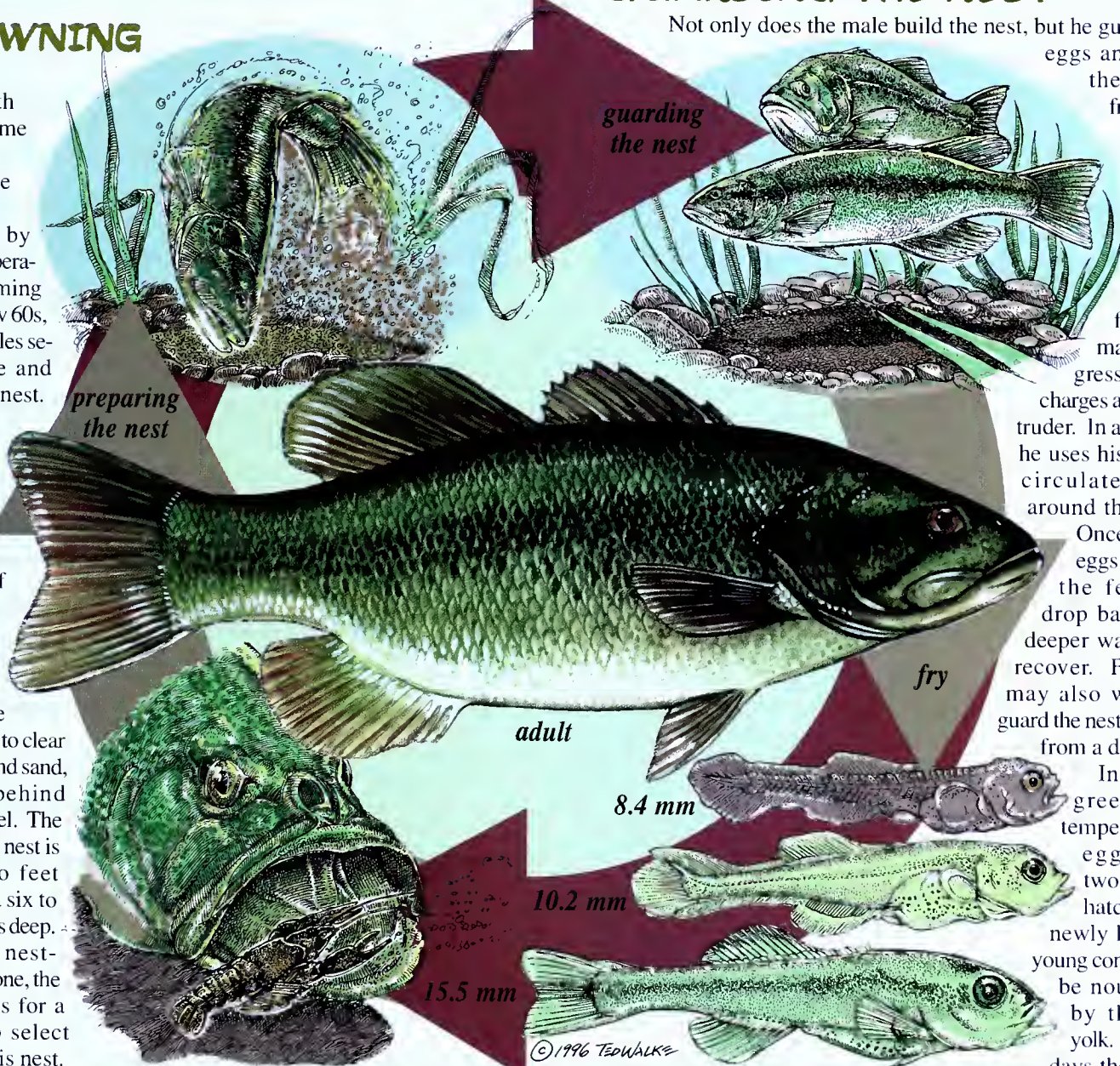
charges at any intruder. In addition, he uses his fins to circulate water around the eggs.

Once all her eggs are laid, the females drop back into deeper water and recover. Females may also work to guard the nesting area from a distance.

In 72-degree water temperatures, eggs take two days to hatch. The newly hatched young continue to be nourished by the egg yolk. In a few days the sac is

absorbed and the young fry, about an inch long, leave the nest. They school and seek the protection of aquatic vegetation.

There they eat plankton and tiny aquatic insects. As they increase in size their first year, they switch from insects to small fish. At the end of their first year, young bass are about 4 inches long. Young bass are eaten by herons, snapping turtles and other gamefish.



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Pennsylvania **ANGLER**

The Keystone State's Official Fishing and Boating Magazine

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Straight Talk

Bureau of Engineering and Development

When you pull your vehicle into a Fish and Boat Commission access area for a morning of recreation, many things are probably running through your mind: Getting your boat into the water, making sure all your gear—including the proper life jackets—is on board, and the hope that maybe today you'll land your biggest catch yet. In all that excitement, you may not stop to consider how the property was obtained, how the parking facilities were designed, who put in the launch ramp, and how much effort it takes to maintain the property by arranging for cutting of grass and collection of litter.

These and many other related duties are the responsibility of the Commission's Bureau of Engineering and Development. The role of the Bureau is to provide expert professional engineering, construction and maintenance services in support of Fish and Boat Commission programs. The Bureau's staff members work to acquire property the Commission deems important. They also perform the appropriate surveys, design the facilities, and then construct and maintain them.

Access to the water is necessary to provide fishing and boating opportunities. The Commission, through the Bureau of Engineering and Development, works to provide free angler and boater access by acquiring lands or easements to riparian (shoreline) property. In recent years, significant acquisitions include properties along Spring and Penns creeks, Centre County; North East Marina and Elk Creek, Erie County; Falling Spring Branch, Franklin County; Yellow Breeches Creek, Cumberland County; Cush Creek, Clearfield County; Delaware River, Wayne County; and others.

Appropriate development is planned for some of these properties. Each year

about 40 major projects and 50 smaller ones are performed at Commission sites. On average, the Commission is able to construct two new accesses per year. The priority for these access sites is determined from criteria such as user demand, water quality, fishing quality, accessibility and project cost.

In addition to construction on Fish and Boat Commission properties, the Bureau of Engineering and Development provides technical guidance to municipalities that desire to develop public access in their communities. The Commission enters into about five of these cooperative arrangements with municipalities each year.

The work is not done once a facility is created, however. Maintenance is a major undertaking for the Commission. Included in this maintenance are approximately 280 access areas and 54 dams. The Bureau of Engineering and Development administers more than 90 separate contracts for mowing, litter pickup and toilet facility upkeep. In addition to regular maintenance, staff also average two major repair/renovation/expansion projects at already existing facilities each year. The Bureau also responds to the need for site repairs when Mother Nature turns nasty, such as with the floods earlier this year. To ensure that Commission properties may be enjoyed by all anglers, the Bureau is also responsible for bringing facilities into ADA compliance.

As well as highly visible projects like access areas, the Bureau's hard work benefits sportsmen from "behind the scenes." Much effort goes into projects at our fish culture stations. Work there ranges from complete renovations and upgrades to smaller projects like well rehabilitation and various facility and equipment repairs. In recent years, the



Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

Commission has spent much time, money and effort to upgrade effluent control systems at our hatcheries and to install raceway covers to prevent loss of fish to marauding birds. In addition to these planned projects, staff respond for emergency repairs that save hundreds of thousands of fish that would otherwise have perished. The Bureau is also responsible for managing more than 25,000 acres of timber owned by the Commission.

Best of all, much of the work performed by the Bureau is eligible for 75 percent reimbursement through the Federal Aid in Sport Fish Restoration Program. So for every fishing licence or boat registration dollar invested by the Commission, we can qualify for \$3 in Federal Aid.

All in all, the work and services provided by the Bureau of Engineering and Development are keys to the agency's ability to provide fishing and boating opportunities. So the next time you pull into an access area or land a trophy catch, take a second and think to thank the Bureau of Engineering and Development. Chances are, they had a large role in ensuring you had a good day on the water.

Peter A. Colangelo

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Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

White Flies on the Upper Susquehanna River by Charles R. Meck.....4

Ya Gotta Have a Hat by Mike Bleech.....7

PA's Plentiful Pickerel by Bob Butz.....10

Ralph W. Abele 75th Birthday Observance.....12

PA Fish & Boat Commission Publications List.....13

Northeast PA's Best Trout Streams by Charles R. Meck.....15

All About Hooks by Darl Black.....19

Our Overlooked Creeks by Mike Bleech.....23

Southeast PA's Summertime Smallmouths by Vic Attardo.....26

SMART Angler's Notebook by Carl Richardson.....31

This issue's front-cover largemouth bass was photographed by Doug Stamm.

PFBC Goes Online with World Wide Web Site

The Fish and Boat Commission is now providing information of interest to anglers and boaters at its new site on the World Wide Web. The Commission joins most other state agencies in maintaining a site where the public can obtain additional information about its programs and organization. The address for the Commission's Web site is:

http://www.state.pa.us/PA_Exec/Fish&Boat/pfbchom2.html

At this address anglers and boaters from throughout Pennsylvania and across the nation can find up-to-date information about the Commission, our programs and fishing and boating in Pennsylvania.

The Fish and Boat Commission is dedicated to improving communication with our customers, the anglers and boaters of Pennsylvania. With our active media relations program, our *Pennsylvania Angler* magazine, and our other outreach efforts, we hope that Pennsylvania anglers and boaters will be the best informed in America. The World Wide Web gives us another chance to bring together at one convenient location a wide variety of information. You'll find our news releases, our proposed regulations, our calendar of events and much more. If you want to learn more about the Commission's history, you can find a chronology of some of the major developments from 1866 to today. If you're interested in career and volunteer opportunities or snakes in Pennsylvania, you'll find valuable information. If you want to know what's coming in *Pennsylvania Angler* or get subscriber or contributor information, it's available on the Web.

The Commission's new Web site is one of several that provides information about fishing and boating in Pennsylvania. For example, there's a wealth of information about Pennsylvania fly fishing at the Pennsylvania Fly Fishing home page (<http://www.easetech.com/pafish>).

The Commission's web site is maintained at no cost to the anglers and boaters of Pennsylvania through a cooperative arrangement with the Office of Administration's Central Management Information Center Multimedia Group.

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White Flies on the Upper Susquehanna River

by Charles R. Meck

For many years I've fished the white fly hatch on the Yellow Breeches near Boiling Springs in southcentral Pennsylvania. When these mayflies appear there in mid-August and late August, trout go on a feeding frenzy. In the past 10 years the same hatch has appeared on the Little Juniata River. On this central Pennsylvania trout water the hatch usually begins around the third week in August and continues for more than a week. The hatch on the Yellow Breeches is much more spectacular than the one on the Little Juniata River, and so are the hordes of anglers who annually throng to this stream to see this happening.

The white fly, however, is more noted on warm water than on cold. If you've fished the Susquehanna or Juniata rivers in late July and early August, you already know how heavy this hatch can appear. For years anglers have followed the hatch upriver, fishing it in the Harrisburg area around the middle of July. Bryan Meck, Keith Clinton of Lancaster, and Wendell Blackman of York fish the hatch many evenings on the river around York when the white fly emerges. Keith has fly fished the white fly hatch for years. They're not alone. Many other fly fishers work this prolific, well-known hatch.

The hatch moves upriver, into the Juniata River and up to Lewistown, appearing there around early August to mid-August. Dick Wilt, an avid fly fisher from Huntingdon, often hits a profuse white fly hatch on the Juniata River near Huntingdon in mid-August.

But what about the Susquehanna River in the Wilkes-Barre-Scranton area? Does this warm water hold any white flies? It certainly does! And in many areas where the hatch appears you'll find you're alone when it appears. Yes, often there's not one other angler in the area fishing over bass rising to this hatch. The hatch arrives in this area around August 1. I can still remember those trips across the steel bridge that connected Pittston and West Pittston. On some evenings at that time of year these white mayflies swarm and die on the bridge in such great numbers that authorities have closed the bridge because of the slippery conditions. I can vividly remember television and radio sta-

tions reporting that they closed the bridge because of "bugs." These so-called bugs were white flies that emerge in tremendous numbers on the Susquehanna River.

Long before I knew what matching the hatch meant, I fished on the Susquehanna River with streamers and Woolly Buggers.

I caught plenty of bass on a black-bodied Woolly Bugger and continued to fish this pattern in heavy water throughout the summer. Then one evening it happened. Lee Eckert of Dallas accompanied me. On the last day in July I had to decide whether to fly fish on Bowman Creek or the nearby Susquehanna River. In late July Bowman can be warm and extremely low, so I opted for the river.

Lee and I arrived at the river just a few miles above Tunkhannock, and I began casting my size 10 Woolly Bugger in a heavy riffle in front of me. In an hour of fly fishing I landed a half-dozen heavy smallmouth bass—not bad for late

July. Then it happened—around dusk some fairly large mayflies emerged and quickly escaped. Soon thousands and thousands of others appeared and the entire river from one shore to the other on this 200-foot-wide section held these mayflies hovering just a couple of feet above the surface. Soon some of the large females that had already mated landed on the river's surface, and the water went wild with rising fish. Smallmouth bass that just a few minutes before seemed averse to coming to my Woolly Bugger now showed on every stretch of the water. Did I have a pattern that evening to match that hatch? No! I swore I'd never come back to this river another time without plenty of those white flies.

Almost a year later I brought my son, Bryan, with me to see this action unfold. We waited until almost dark until the hatch began. First, a few white mayflies emerged. Then thousands and thousands emerged, and every smallmouth bass in that section of the river rose to the new food supply. Bryan and I caught bass until well past 10 p.m. The last hour we cast to slurping noises and continued to catch bass. Each time we heard a noise we cast in that general direction.



White fly
imitation

Bryan even caught two heavy catfish that fed on dead spinners on the surface. I remember Bob Budd of Altoona once telling me how he caught a nine-pound catfish on the lower Susquehanna River on a White Fly pattern during the hatch. Keith Clinton caught five heavy catfish one evening during the white fly hatch.

Jack Ganz and Ernie Pagliarini of Luzerne have fly fished the white mayfly hatch on the river for the past five years. Jack's fly fished for more than 30 years, but the past few years he's recognized how effective matching the white mayfly on the river can be. He normally fishes the hatch two or three times a year and he never ceases to be amazed by the intensity of the hatch.

Just this past year Jack and Ernie waited and waited for the hatch to appear. It finally happened near dusk and continued until 10:30 p.m. They fly fished on the river near Harding at the Appletree Access, Luzerne County. Before the hatch began, Jack said he would have sworn the river didn't hold a bass. Once the hatch began, the river came alive with bass rising to the spent spinners. Jack caught more than 30 bass one evening during that hatch. By the way, Jack said he saw not one other fly fisher enjoying the hatch that evening.

You can experience the same success on the section of the Susquehanna from Berwick upriver past Tunkhannock. Tie or buy some White Fly patterns and arrive on the river the last day or two of July and the first week of August. Stay until dusk—on many nights these mayflies don't appear until it's almost completely dark.

Bass seem to sense when the hatch occurs and lose all timidity and ferociously feed on dead spinners on the surface. If you can, look for a heavy riffle and wait for the action to begin. Familiarize yourself with your surroundings during daylight so you know where you are when darkness arrives. You'll probably fly fish well after dark.

Which patterns work best? All you need is a size 14 White Wulff. It's as effective as any other. You'll be doing much of your fishing after dark, so the white wings help you locate your fly.

However, if you'd like to match the hatch a bit closer, use a pattern with a white tail, white hackle, white deer hair wings and white hackle. I often tie my patterns parachute-style with a post of white deer hair. I strongly believe that these parachute patterns don't ride as

Which patterns work best? All you need is a size 14 White Wulff. It's as effective as any other. You'll be doing much of your fishing after dark, so the white wings help you locate your fly.



White Flies on the Upper Susquehanna River

high as the classic full-hackled Catskill-type patterns. In riding lower in the water the parachute White Fly much more closely represents the natural. I also tie a pattern on a short-shank hook with oversized hackle. You can skate this latter pattern across the surface and often antagonize fish into striking. Cast this long-hackled pattern a foot or two above a rising bass.

Don't worry about the hordes of anglers that you see when the same hatch appears on the Yellow Breeches or the Little Juniata. Jack Ganz said he saw only one or two other anglers fishing at the time the hatch appeared—and they were using bait. All the times I've met the hatch on the river I've never encountered another fly fisher matching the hatch. So you'll have plenty of room and little angling competition, and a great hatch to match as an added bonus. Why not give it a try?

Remember—at this time of year, many of your favorite trout streams are low and warm. You can fish the river without worrying about either aspect.

White fly emergence characteristics

To fish the white fly hatch (*Ephoron leukon*) you should know something about the habits and characteristics of this mayfly. The white fly is one of a number of burrowing mayflies. In other words, it lives most of its life as a nymph embedded under gravel in the stream or river. Members of the species usually begin moving toward the surface of the river near dusk. Some emerge as early as 7 p.m., but the hatch usually blossoms fully around 8 p.m. Once the hatch starts it continues for more than an hour and can continue well past 10 p.m. Cool evenings seem to cut short the hatch.

The female white fly is very unusual. It never molts to form the mating spinner, but mates as a dun. Few other mayflies do this. The male, however, does molt and becomes a spinner in the air. You can often distinguish males from females because the former have the pellicle, or skin of the dun, trailing behind them. The legs of the female are atrophied or not fully developed. They don't need to be completely developed because this mayfly never rests on a branch or tree, but immediately begins mating in mid-air. Unlike most other mayflies, the white fly emerges, mates and dies in one evening.

These male and female mayflies meet and mate over the water and the females fall onto the surface. As soon as they touch the surface they exude the fertilized eggs. These eggs usually remain dormant until the following spring.

Tactics

- **Don't leave the river too early.** If you've heard reports that the hatch has begun, stay until well past dark. I've seen some anglers leave just as dusk approached and they missed the entire hatch.

- **Tie on a pattern well in advance of darkness.** Remember that it's difficult to change flies after dark, even with a light.

- **Use a 3X or 4X tippet.** If you do get into a heavy catfish or a three-pound bass, you don't want to lose the fly.

- **You'll have to learn to cast to sounds.** I hate fishing after dark. I like to see my surroundings and pinpoint the fish rising. You don't have that luxury often with the white fly hatch. Bass don't get turned on to the naturals some nights until well after dark. Before darkness sets in, learn your surroundings and stay in the same general area. There's nothing like falling

over rocks and boulders at dark. Once darkness sets in, stay put.

- **If the bass don't take the White Fly on a natural drift, then purposely make the pattern drag.**

Sometimes they'll go for that. I remember vividly the night Bob Budd carried his fly rod over his shoulder as he waded upriver on the Little Juniata. A trout hit the pattern as he was dragging it behind him.

- **Carry a flashlight with you.** As much as I detest tying on a new pattern after dark, I almost always am confronted with doing just that. If you hit a heavy hatch, you won't have to worry about changing patterns because the bass won't take it—they will. However, you'll lose some patterns.

- **Check the river every few days to see when the hatch begins.** Better yet, if you have someone who lives near the river that person can let you know when the hatch begins. Once it starts, white flies will appear for a week or more in the same general area. But remember that peak emergence sometimes lasts for just a couple of evenings.

Fishing the nymph

If you arrive early, before the hatch begins, why not fish the nymph of the white fly? Tie the nymph on a size 14 Mustad 3906B hook. Tie in some ginger brown hackle fibers for the tail and legs and dub pale tannish-gray angora for the body. Fish the pattern just off the bottom and work it toward the surface. Fish this until the smallmouth bass start feeding on the surface.

You can use the tandem of a White Fly dry fly and tie the nymph about two to three feet behind the dry fly. Connect the nymph at the bend of the hook of the dry fly. You can fish this rig even after the duns begin emerging. Bryan Meck and I used this system on the Yellow Breeches for trout, and we found that during the height of the hatch we caught three trout on the nymph for every trout on the dry fly.

Next time you hear that authorities have closed a bridge in the Wilkes-Barre and Scranton area because some "bugs" have made the road slippery, drop everything and go fly fishing. Go fly fishing on the river near Harding, Falls or Tunkhannock in northeastern Pennsylvania for the white fly hatch. Even if you don't hear about any bridge closings plan to fish the white fly the last week of July and the first week of August. Take plenty of White Fly patterns with you and stay well after dark. It just might convert you to matching a hatch for smallmouth bass when the fantastic white fly appears on the upper Susquehanna River.

ANGLER

Access Information

The new Pennsylvania Fishing and Boating Map shows public boating access areas, lakes, special-regulation fishing areas, Commission fish culture stations and regional offices, and other information that may interest anglers and boaters—and those wishing to gain access to the Susquehanna to work the white fly hatch. The map is available at no cost at Fish and Boat Commission offices. To obtain a copy of the map by mail, contact: Publications Section, PA Fish & Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000. Please include \$1 per map for postage and handling.

Ya Gotta Have a Hat

by Mike Bleech



After a scorching hot day, the cool breeze drifting upriver felt divine. My pal, Bill, and I were sunk into lawn chairs on the river bank, watching four rods propped in forked sticks. Behind us our wives tended hamburgers on a charcoal grill, an unusual treat because both Bill and I do most of the cooking in our homes.

One of my rod tips bounced. Then the line tightened and the rod went into a deep bend. I reached down, grabbed the rod handle and set the hook. The fish reacted with a long, drag-screaming run almost to the opposite side of the river. Slowly I worked the fish back across the river by pumping and reeling, until the golden sides of an 8-pound carp became visible. But when Bill attempted to net the carp it took off again, stripping out almost as much line as it had on the first run.

Four times I pumped and reeled the fish within reach of the long-handled net before Bill finally secured it. With a quick twist of his needle-nose pliers he removed the hook and released the carp. I re-baited, cast to the edge of the channel, slouched back into my chair, and pulled down the brim of my hat to shade my eyes from the sun.

"Ya know, Bill," I said. "I think I've finally figured out the real secret to good fishing."

"What's that?" Bill replied after a pause—so long I thought he might be sleeping.

"Ya gotta have a hat. Not just any hat. I think the real secret to good fishing is having a lucky hat."

"Sure. Why not?"

Bill never was one to argue. Nor is he as talkative as I can get. At that point our brisk conversation was interrupted by another 15-minute battle with a carp.

"Just think about it," I said when we again relaxed into our chairs.

"About what?"

"The hat. How many times have you had a good day of carp fishing when you weren't wearing a lucky hat?"

Bill turned and looked at me without saying a word. It was the look he gives to remind me it's time to click my heels together and get back to Kansas. Any-

Ya Gotta Have a Hat



Soft-shell crayfish are excellent carp baits.

way, how could he argue with "logic" like that?

One of the greatest truths revealed to me while carp fishing is that carp fishing is great fun. To young anglers, especially, who have not been tainted by the absurd notion that some other fish are more glamorous than carp, that catching some other fish is somehow more honorable than catching carp, the thrill of battling one of these powerful fish can spark a lifetime of angling enthusiasm.

I bet that if you take a kid, or better still, kids, carp fishing a few times, you will grow to love it. As perfect as carp fishing is for kids, though, it certainly is not just for kids.

Like many anglers, a carp was the first big fish I caught. It was in the days of the "knuckle-buster" reels, and I learned that day why they were called "knuckle-busters." As the big carp made several long runs, the reel handle spun out of control, smacking and bloodying my knuckles. Losing some skin from my knuckles was well worth the thrill of catching a 20-pound fish. I knew enough to keep clear of the spinning handle when I caught an 18-pound carp later the same day.

To my great fortune, I never lost sight of the fact that carp fishing is fun. It is almost always done by still-fishing, a relaxing, soul-quenching pastime that might be closer to what many of us want out of fishing than the high-tech power fishing sold to us by most outdoor media today. Fishing has a lot to offer. A bit of relaxed carp fishing now and then has never tainted my enthusiasm for other forms of fishing. Granted, I have taken some good-natured ribbing when caught

fishing for carp. But I have also inspired some converts.

Through the years my quest has always been to catch bigger carp. The peak of my quest for giant carp, so far at least, occurred in 1977, when I was the world

carp fishing champion. That's the way I look at it, anyway. For many years, *Field & Stream* magazine ran a fishing contest. Before big money fishing tournaments became a national pastime, that contest was probably the most notable worldwide fishing contest. Winners did not get any money—just pins. But those pins were badges of honor.

I was fishing a soft-shell crayfish on a long gravel bar when the run-away submarine sucked in my bait. After an hour-long tussle, my partner slipped a net under it. We dubbed it "Gums." It weighed 36 pounds, 7 ounces, and won the unlimited division in the *Field & Stream* fishing contest.

Carp grow to immense proportions. Our state record weighed 52 pounds. It was caught in the Juniata River, Huntingdon County, in 1962 by George Brown. The North American record, according to the National Fresh Water Fishing Hall of Fame, weighed 57 pounds, 13 ounces. I am absolutely certain that carp weighing upwards of 60 pounds swim in Pennsylvania. I believe I saw one that might weigh

Terminal Rigs for Carp

12 inches

The most important ideas to keep in mind when rigging a line for carp are to use just enough weight to keep the bait in place, to keep the bait on or close to the bottom, and to match the hook to the bait. This simple sliding sinker rig, with minor variations, is very good for any carp fishing situation.

The swivel in this rig keeps the sinker from sliding to the hook, and it keeps the main line from twisting. While a bait is anchored on the bottom, the swivel often spins continually. The sliding sinker allows the carp to move the bait without feeling the weight of the sinker.

Treble hook variation for dough balls

sliding sinker

swivel

treble hooks

80 pounds in Conewango Creek, a large waterway that flows into the Allegheny River at Warren.

The best advice on catching big carp that I can offer is to fish in big-carp water. Obvious as this sounds, it is the most important factor when seeking any big fish. Fortunately, depending on how you look at it, there are a lot more places in the state where you are likely to catch big carp than trophies of any other fish species. Rivers and lakes are generally best. See page 10 of last month's *Angler* for a list of our best carp waters.

Within a specific waterway, certain places tend to hold larger carp. But I do not know of any formula for finding these places, other than trial and error.

Tackle

Tackle used by most Pennsylvania anglers is the biggest reason more giant carp are not caught. Keystone State anglers are light-tackle oriented, because most anglers get started by equipping themselves for trout, walleyes, bass or crappies. A medium-power spinning outfit spooled with 8-pound-test line is fine for modest-sized carp, but against a 20-pound carp it makes things difficult. I have caught a few 20-pound carp using 8-pound-test line, but it has involved chasing the carp with boats, or scrambling around logs and over slippery rocks.

A 30-pound carp I hooked in Lake Erie while fishing near shore for steelhead was netted 2 1/2 miles from where it was hooked. It had completely inhaled a small jointed crankbait.

From time to time a few of my friends get together for informal carp fishing tournaments. Our first prize for the heaviest carp is that the winner gets to do the cooking, usually hot dogs. Any hot dogs that remain are used as bait. That, by the way, is a great carp fishing trick. There are times when it seems that hot dogs are the best possible bait, especially when they have been cooked, which makes the oil run.

Bait

Bait is a favorite topic of carp fans. I usually stick with the quick and easy favorites—nightcrawlers, soft-shell crayfish, canned corn and commercial dough bait. The best bait for the biggest carp, I firmly believe, is soft-shell crayfish. My brother Greg, who takes carp fishing as seriously as anyone can get while sleeping in a lawn chair, prefers canned corn.

A few of my fishing friends have made a science of concocting their own dough

baits. They spend hours testing ingredients for the right smell, consistency and ability to stay on a hook. They guard their secret formulas as if they were protecting them from international spies.

The simplest dough bait is made by wadding damp bread into a dough. Some carp anglers make basic dough with cereal. More aggressive carp anglers mix in strawberry flavor, such as Jello or Kool Aid. Oil of anise and vanilla are also popular carp dough flavorings. The next time I make dough balls I plan to flavor them with a commercial crawfish scent.

Mixing the dough into cotton balls will keep it on the hook better. I have even seen carp anglers tie dough baits into salmon egg sacks. Keeping dough balls on the hooks is one of the most vexing problems of carp fishing. Whatever solution you find, it will work better if you use treble hooks.

Carp myths

One of the myths about carp is that they don't strike artificial lures. This is one of the justifications carp detractors use for not classing carp as game fish. I concede that artificial lures usually are not a wise choice for carp fishing, but carp most certainly do strike artificials.

One of the more unusual carp fishing patterns I have experienced is catching them with spoons and small crankbaits during the dead of winter in warmwater discharges. Of all the times I would not have expected carp to strike fake lures, winter would be the most unlikely time. Yet, I have taken several carp weighing more than 30 pounds this way. The trick is retrieving the lure very slowly.

Another more absurd myth about carp, one borne only by American anglers, is that carp are not good to eat. In fact, they have white, flaky meat that rivals walleyes and whitefish. They are excellent for smoking, baking and broiling.

One reason many anglers fear eating carp is based on another myth, the "mud streak." The body part referred to as a "mud streak" is actually the kidney, and all other fish have it. But in carp it tends to be larger only because carp tend to be larger than other freshwater fish.

A word of caution about eating carp is prudent, however. As bottom feeders, carp tend to accumulate toxins from polluted waters more rapidly than some other fish. There has been, for example, a health warning about eating carp from Lake Erie, parts of the Susquehanna, Schuylkill, Beaver, Ohio, Shenango and Monongahela

rivers, and Chartiers and Little Chartiers creeks. If you are going to eat carp, catch them from cleaner water, and choose smaller carp.

The wildest story I have heard about carp was told to me by an old-timer who had retired to a cabin on the Allegheny River. He claimed carp were eating ducklings.

"I watch them hunting for something floating on the surface," he said, referring to the carp habit of swimming with their mouths at the surface. "They just suck those baby ducks right down. The ducks never see them coming when the river is muddy."

Arguing with the gentleman was pointless. He observed the broods of mergansers and mallards getting smaller, and saw carp in the same places. It seemed obvious to him that carp were decimating the duck population. And who is to say that there are not monstrous carp swimming our waters with bugle lips wide enough to inhale a hapless duckling?

ANGLER

Carp Fishing Tackle

Medium to heavy fishing tackle is adequate for carp fishing. Some anglers even carp fish with fly-fishing tackle. However, if your goal is big carp, stick with heavy tackle.

For big carp, use line testing at least 12 pounds, and a lot of it. Large carp often run 100 yards or more of line off a reel. You might be able to slow them down with heavy line, but they still run a long way. What if you hook up with a carp that tops our 52-pound state record? Then 20-pound-test line will seem light.

A reel with a bait clicker is useful. That's a device that lets a carp, but not mild current, pull out line. It prevents the fishing outfit from being pulled into the water. The bottoms of our lakes, rivers and creeks are littered with rods and reels that were not watched closely enough by anglers. It takes a carp only a couple of seconds to pull a fishing outfit into the water. The buzzing of the bait clicker alerts you that a carp has the bait. You might even clip a bell to the end of your rod if you occasionally let your eyes slip closed.

Rod holders are a must, because it is illegal in most places to cut forked sticks.

A folding chair is another essential item. Carp fishing is a waiting game. The options are standing, or sitting on a rock, a log or a muddy river bank.—MB.

PA's Plentiful Pickerel

by Bob Butz



Pickerel are impulsive strikers. I've found that lures that are fast-moving, and those that have a lot of flash and a little vibration always produce more results than what I call "feeding-type lures"—lures that are trying to resemble some sort of natural forage.



My friend Todd lives along a lake that is absolutely loaded with pickerel—big, mean, hungry pickerel. They're so big and mean and hungry that nothing else appears to live in the lake. It's the only place in the world I know where frogs jump away from the water when you scare them. It's also the kind of lake where you catch a fish on almost every cast. You can get cocky on Todd's lake. You can talk the night before about how many fish you're going to catch. You can even bring a stringer along for the ones you want to keep. These are things you would never do on any other piece of water. The fish would somehow hear you talking, or they'd read your thoughts and not cooperate. But not in Todd's lake.

I usually have trouble sleeping if I know I'm going to be catching pickerel in the morning. Todd doesn't know this, but a few times I was so restless that I took my fishing rod and sneaked down to the lake in the middle of the night, just to make a couple of casts. Always there were the frogs, tiny leopard frogs and tremendous bullfrogs in the beam of my flashlight, staying just ahead of me in the tall, brown grass, or taking their chances in the woods, plodding through the leaves in slow, heavy leaps—anything to avoid that fatal leap into the water.

The chain pickerel is the largest species of pickerel found in Pennsylvania's waterways and the one most often caught by anglers. It can be most easily distinguished from its closest relatives, the grass pickerel and redfin pickerel, by the distinct chain-like markings on its

sides. Color phases of chain pickerel range from green to bronze. Growing quickly, chainsides can reach 14 inches in three years, 20 inches in six years and up to 36 inches if they live the maximum of 10 years. Anglers sometimes confuse big chain pickerel with northern pike, understandably because of their similar shape, cagey disposition and toothy grin. Hence, they are nicknamed "little pike."

Not long ago, my own experience with catching pickerel was limited to incidental encounters while fishing for trout in mountain streams. These fish were always anemic-looking specimens—small, skinny and slimy—and I found no redeeming qualities in them. Other anglers I talked to shared my sentiments, calling the pickerel a minnow thief and a sorry fighter that couldn't even be served as palatable table fare—"too bony" is what they said.

Most of the pickerel's bad reputation can be easily explained if you consider that the major harvest of chainsides comes from anglers accidentally catching them while in pursuit of more "dignified" quarry, like walleyes and bass. For an angler to get the most out of pickerel fishing, heavy baitcasting reels, multi-hook lures and rug-beater rods should be left at home.

Tackle

Proper tackle for pickerel fishing consists of a light or ultralight rod designed for 1/4-ounce to 3/8-ounce lures in conjunction with any light, fast reel, loaded with 4-pound to 8-pound line. Chainsides can also be taken with small to medium poppers and streamers, thrown with a 5-weight or 6-weight rod.

Remember to keep it simple, especially when it comes to lure choice. Chain pickerel have a habit of inhaling lures when they strike. It's for this reason that lures with multi-hooks and trebles should be avoided. Take my word for it, struggling with six or nine barbs in a mouth full of needle-like teeth is an instant formula for frustration. On the contrary, single-hooked fly and spinning lures are surprisingly easy to remove, especially with a pair of good pliers or a hemostat.

My favorite lure for catching pickerel is the in-line spinner. I especially like spinners with white or black skirts in sizes 2, 3 or 4. The smaller spinner works better in shallow water. The larger size can get down deep and can be cast farther if the need arises. I like black or white skirts, but to be honest, I'm most concerned with the color of the blade. Pickerel like a lot of flash, so look for spinners with chrome blades or ones with reflective tape on them.

This is not to say that the spinner is the best lure for chainsides. My friend, Todd, uses spoons almost exclusively and I can't say that I ever caught many more pickerel than he has. In fact, this past summer Todd caught the biggest pickerel I've ever seen, a 28-inch fish, on a spoon.

I've experimented with plastic worms, crankbaits and surface plugs, but all with marginal success. The thing to remember is that pickerel are impulsive strikers. I've found that lures that are fast-moving, and those that have a lot of flash and a little vibration always produce more results than what I call "feeding-type lures"—lures that are trying to resemble some sort of natural forage.

Presentation

This brings up special consideration for the fly fisher. My initial attempt at trying to catch chainsides on the fly was boring and frustrating. Boring, because I couldn't provoke a fish to strike, and frustrating, because I knew the fish were there. My problem was the presentation.

I would lay the fly perfectly out across the water, just at the end of some sort of structure. If it was a popper or surface bug, I would let it sit until all the ripples disappeared, and then I'd give it a twitch or two and let it sit again. I continued this style of retrieve until the fly was back at the boat. If it was a diving-style bug, I would strip the line in slow, little jerks.

It was only after an hour of this that my patience quit on me and in a fit of anger I tied on a big, obnoxious surface bug—actually, it looked more like a deranged and ragged frog instead of any bug I know, but I cast it out and it "plunked" on the water like a stone. I wasted no time in starting my retrieve, which consisted of stripping the line as quickly as I could. All I saw was the water rise up in the V-wake behind the bug. Then there was a flash and an explosion of white water and the fish was on—a monster pickerel that jumped and dived, shot under the boat and broke off before I could get my hands on him.

I modified my retrieve very little after that and found, in time, a number of flies that worked surprisingly well—minnow imitations like the White Marabou and Mickey Finn in size 4, black poppers, natural-colored streamers tied on 2/0, 3/0 and 4/0 hooks, and bucktail frogs and mice. Chainsides seem reluctant to hit streamers and big bass bugs tied with unnatural colors or flies that fail to resemble any type of natural forage.

Habitat

Chain pickerel are creatures of the weeds. They lurk in shallow water rarely exceeding six feet, around aquatic vegetation like lily pads and coontail. But you may find them in deeper water during the summer, and if food is scarce, they sometimes roam the shallow water in search of food. But ideally the pickerel likes to sit and wait for its meals. This fact makes a good case for anglers who fish fast and cover a lot of water. Also, if you miss a lunker, chances are you can come back to the same place later and tangle with the fish again.

The chain pickerel is designed to be an inshore feeder. Consequently, in waterways with marginal vegetation the fish always face the shore. But if the shallows happen to be choked with grass, the pickerel will face the deeper water. One thing is for sure—pickerel can always be found on the edges of cover, and it is for this reason that special techniques should be used when fishing for them.

You will get more strikes by casting parallel to grass patches, lily beds or the shore. By casting parallel to cover, your lure should cross the path of more than one fish, tempting them to strike. Pickerel, especially the larger ones, are reluctant to follow a lure away from their chosen hideouts. Also, you will probably find that a fast retrieve appeals more to pickerel than any other fish. Like muskellunge and pike, pickerel may follow the lure. If you find this happening a lot, vary the speed and presentation of your retrieve.

Chainsides strike with the same veracity as a muskellunge. The initial strike, whether you get the hook into the fish or not, is probably the first thing you talk about when anyone asks you about pickerel fishing. Once you have a fish on, your first concern is to keep the fish away from cover. Using hairline tackle makes this a sporting proposition.

Once you have the fish next to the boat, grab it gently behind the head. Remember to bring a good set of pliers. This makes removing the hook easier on you, and more importantly, on the fish.

Ralph W. Abele 75th Birthday Observance

If he had lived, Ralph W. Abele, late executive director of the Pennsylvania Fish Commission, would have celebrated his 75th birthday on August 13. The Commission and related organizations are planning a number of events to mark this occasion and commemorate Ralph Abele and his lifetime service to conservation.

The Commission is currently soliciting nominations for the Ralph W. Abele Conservation Heritage Award. This Award is the highest recognition the Pennsylvania Fish and Boat Commission can provide to persons who distinguished themselves in the cause of conservation. The Commission established the Award to recognize citizens of Pennsylvania who have made outstanding contributions to the protection, conservation and enhancement of the aquatic resources of the Commonwealth. The award serves as a memorial to Ralph Abele for his steadfast and courageous work in protecting and conserving our natural resources. Past winners include Ken Sink, Dr. Maurice Goddard, Dr. Robert Kodrich and Leonard Green.

A person nominated for this award should be a citizen of Pennsylvania who has dedicated his or her time and energy to the conservation of the state's natural resources, specifically the aquatic resources, through one or more of the following accomplishments:

(1) Personally invested heavily in the long-term education of Pennsylvania's youth on conservation issues vital to an improved aquatic environment.

(2) Put at risk one's person and livelihood to undertake public activities and positions on behalf of improving and protecting the aquatic resources of Pennsylvania.

(3) Led a regional or statewide environmental effort that has been recognized for its duration and success in protecting and enhancing the aquatic resources of Pennsylvania.

(4) Played a leading role in reclaiming and enhancing a major significant natural water resource in the Commonwealth.


(5) Led an effort to pass major environmental legislation for the protection, conservation and enhancement of the natural environment of Pennsylvania.

(6) Brought national recognition to Pennsylvania through public activities, actions and contributions to the aquatic resources.



President Jimmy Carter receives his Pennsylvania fishing license in June 1980 from Ralph W. Abele, Executive Director, PA Fish Commission

Employees and active Commissioners of the Pennsylvania Fish and Boat Commission are not eligible for this award. Nominations may be sent to Dennis Guise, Deputy Executive Director/Chief Counsel, Pennsylvania Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000 by no later than July 15, 1996.

The Abele Award will be presented on August 24, 1996, at a gala picnic to mark Ralph's 75th birthday sponsored by the Ralph W. Abele Conservation Scholarship Fund. The Scholarship Fund is a non-profit, tax-exempt organization established to award scholarships in memory of Ralph Abele for post-secondary study in the fields of conservation, ecology and related disciplines. The Fund recently awarded the 1996-97 Abele Scholarship in the amount of \$800 to Erin McIntyre for study at Susquehanna University. All proceeds from the picnic will be used to support the Scholarship Fund. 





Pennsylvania Fish & Boat Commission

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Northeast PA's Best Trout Streams

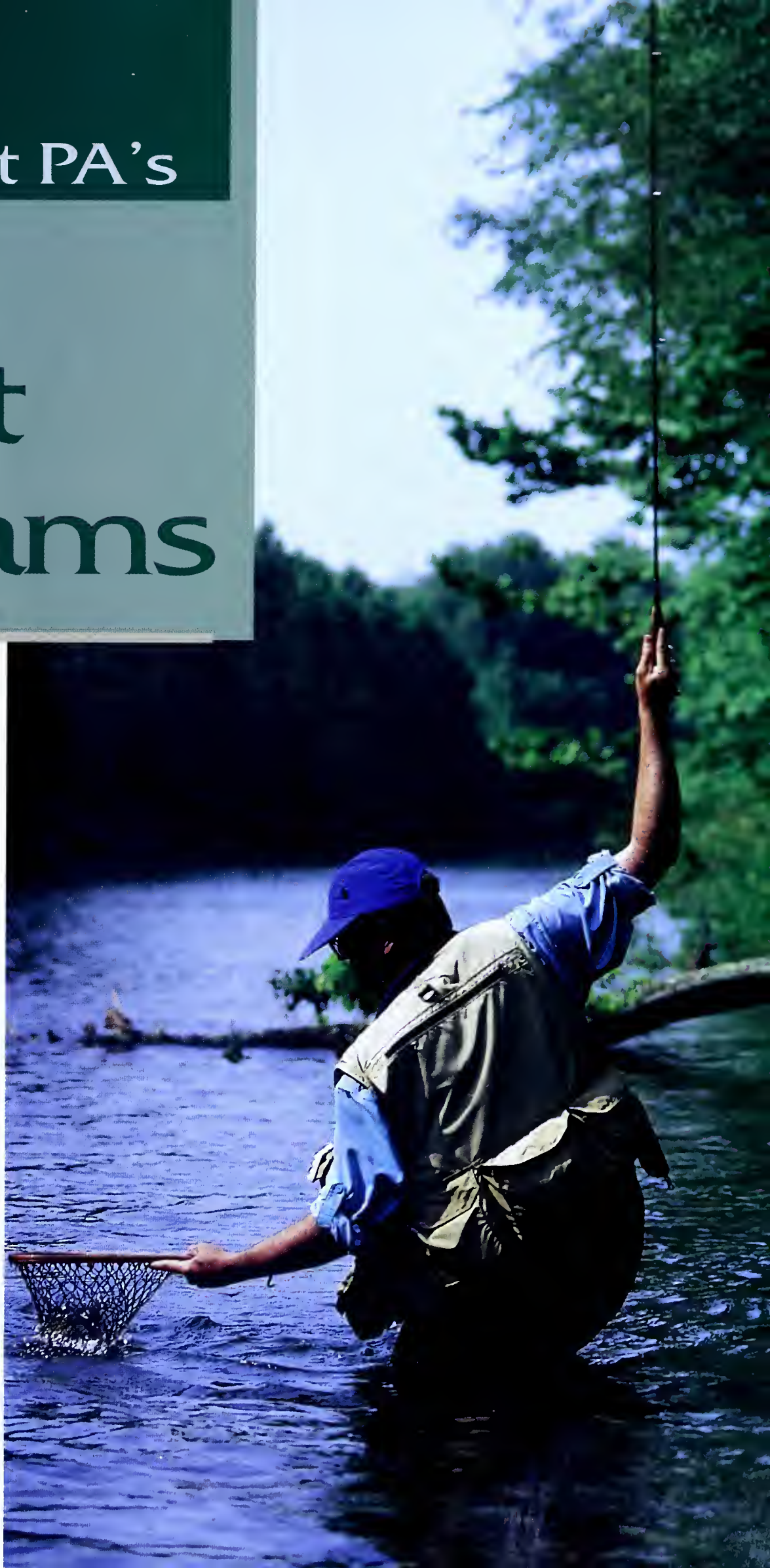
by Charles R. Meck

Several years ago Mike Stevens invited me to fly fish on a stream he had recently heard held some heavy streambred brown trout. Mike is a reporter for WNEP-TV in Moosic. Mike used to co-host the popular show "Pennsylvania Outdoors" with Stan Sowa. More recently Don Jacobs co-hosts this same show with Stan Sowa.

Mike wanted me to see what I thought of this recently recovering trout stream flowing through Scranton. I entered the river near the Archbald ballfield. The water looked unexciting and I saw no fish feeding near the surface. To get to a point where I could cast my fly, I had to wade through ankle-high coal silt.

What a letdown. Could a poor excuse for a trout stream like this hold any trout? I made several futile casts and watched my fly float uninterrupted down a riffle. On about the tenth cast an almost imperceptible rise sucked in the Little Blue-winged Olive dry fly. I set the hook and a heavy fish headed toward the middle of the stream. I guided the fish back toward my side of the stream, put my net into the water, and guided the fish into the net.

I looked in amazement at this 15-inch brown trout that I had just landed. What a beautiful streambred brown trout! Several other heavy brown trout took my imitation before Mike and I ended our short visit to this exciting new waterway—the Lackawanna River.



Best Trout Streams



Tobyhanna Creek, Monroe County

The Lackawanna has truly returned as a viable trout stream in the northeast. From a river devastated by waste and acid mine drainage, it now teems with trout.

The Lackawanna is only one of a number of good trout waters in the northeast part of Pennsylvania. I still have fond memories of some great fishing trips to Bowman Creek near Tunkhannock. I began my fly fishing years in this part of the state. I can still remember my first trip 30 years ago to that great freestone stream. It occurred on the opening day of the trout season. As the season officially opened I glanced upstream, then downstream, and saw not one other angler. Nobody fishing opening day? This top stream, Bowman Creek, held a mile-and-a-half long Fly-Fishing-Only area. In those years few others fly fished. Visit another open section on Bowman Creek that same day and you'd see dozens of anglers, but not on the specially regulated waters.

Times have changed. Bowman Creek has changed. Now the Fly-Fishing-Only section gets plenty of angling pressure, including opening day. It has also experienced some severe drought conditions, hot summers, and acid waters in the upper reaches in the past few years. Still, Bowman Creek ranks as a top trout stream in the state.

Other streams in the area also experience problems with acid waters. The upper reaches of the Mehoopany and the East Branch of Fishing creeks also have problems. Recently the Fish & Boat Commission recognized the problem and with the cooperation of the Stanley Cooper Chapter of Trout Unlimited, the Freestone

Chapter of Trout Unlimited, Fishing Creek Flyfishers, Fishing Creek Sportsmen, Raven Creek Photographers and Blue Heart Bed and Breakfast, they've added limestone to the upper reaches of the East Branch of Fishing Creek.

You'll find much more than just Bowman Creek, Fishing Creek, Mehoopany Creek, and the Lackawanna River in northeastern Pennsylvania. You'll also find the Delaware, Lackawaxen and Lehigh rivers, and the Pohopoco, Tobyhanna and Brodhead creeks.

Delaware River

One of the top tailwaters of the East, the Delaware River holds some heavy trout and great hatches. Access to the river is limited, so make certain you get permission to cross the land to reach the water.

Once on the river you'll find extremely formidable water to fly fish. If you hit the river when there's no hatch, you're really in bad shape. The best time to fish this spectacular river occurs in late June and early July when you'll see caddis and mayfly hatches almost non-stop. Even if you fish the river when one of its spectacular hatches like the green or brown drake, gray fox, blue-winged olive dun or hendrickson appears, fly fishing can be frustrating.

Make certain you have plenty of backing on your reel. I've seen heavy rainbows on the river take me into my backing on several occasions.

You can access the river at Balls Eddy and just upriver from Equinunk. PA Route 191 nears the river from below Hancock and SR 4014, upriver.

Lehigh River

Few anglers outside the area think of fishing the Lehigh River. Limited access on some of its stretches and some past problems have relegated this river to a second-class stream. In the past this great river held some spectacular hatches like the green drake. It lost this sensational hatch in the late 1950s, but it has returned recently to parts of the river above the Francis E. Walter Dam.

Below the dam, near White Haven, the Lehigh broadens to a fairly wide river. The March brown and slate drake hatch below the dam bring trout to the surface.

The Lehigh has a good population of streambred browns above the dam and some holdovers below. Much of the river above the dam has limited access.

Lackawanna River

You have to try this river to believe the number of trout it holds. You'll find some of the best fishing on it from Archbald to Olyphant. Here the river holds some good riffles and heavy pools. Even though you're fishing in an urban area, access is not difficult. Several local groups have developed a 40-mile greenway along the river, which helps anglers with access.

Hatches on the river aren't all that great yet. I have witnessed several caddis hatches in early June including the tan caddis, a gray fox hatch in late May, and some tricos in July and August.

The Fish and Boat Commission has recognized the value and potential of this recently recovered river and has recently designated it as a Trophy Trout area. If you haven't fished here yet, you have to try it.

Bowman Creek

Located just north of the Wilkes-Barre, Bowman Creek holds some great hatches and streambred trout.

For years Tom Bean of Noxen and I fly fished on sections above Stull for native brook trout. Recently some acid rain and tannic acid have reduced the number of trout in this area.

Below Noxen, Bowman broadens into a great freestone stream. From Noxen downstream to Evans Falls you'll find some posted sections. A few miles below Evans Falls you'll find a one-mile section of Delayed Harvest, Fly Fishing Only. This section of Bowman holds some respectable hatches, including some hendricksons and early season blue quills, and a trico hatch and spinner fall in late July and August. You'll also find a good slate drake hatch in early June and again in September.

The largest trout I've ever caught on Bowman, a 20-inch brown trout, fell for a Slate Drake pattern in early September.

Bowman holds some deep pools and productive riffles. Some of the best fishing is below the Delayed-Harvest area just above the Sugar Hollow tributary. Temperatures usually hold up well during midsummer.

Brodhead Creek

For years I had heard about the Brodhead Creek and the great hatches it held. Now I accompanied Don Baylor for a day of fly fishing there. Don's a teacher and a fly fishing enthusiast. In addition, he's an accomplished entomologist and can identify the hatches on any Pennsylvania stream.

The early June evening we selected to fish this stream we hit a simultaneous hatch of sulphurs and pink ladies. Don and I tied on Sulphur patterns and caught a half-dozen brown trout. Some of these fish measured only a few inches long and Don identified them as streambred brown trout.

Don't overlook this freestone stream. You'll find plenty of hatches, especially the early ones like the blue quill, hendrickson and quill gordon. By late May you'll find plenty of sulphurs and rising trout.

In 1955 Hurricane Dianne destroyed much of the trout fishing on the stream. The Brodhead Chapter of Trout Unlimited, in cooperation with the Fish and Boat Commission, placed hundreds of tons of rocks in the stream to improve the habitat. The Brodhead has begun to return.

The best area to fish is from Analomink downstream. Above that town you'll find mostly private water. PA Route 447 parallels much of the river.

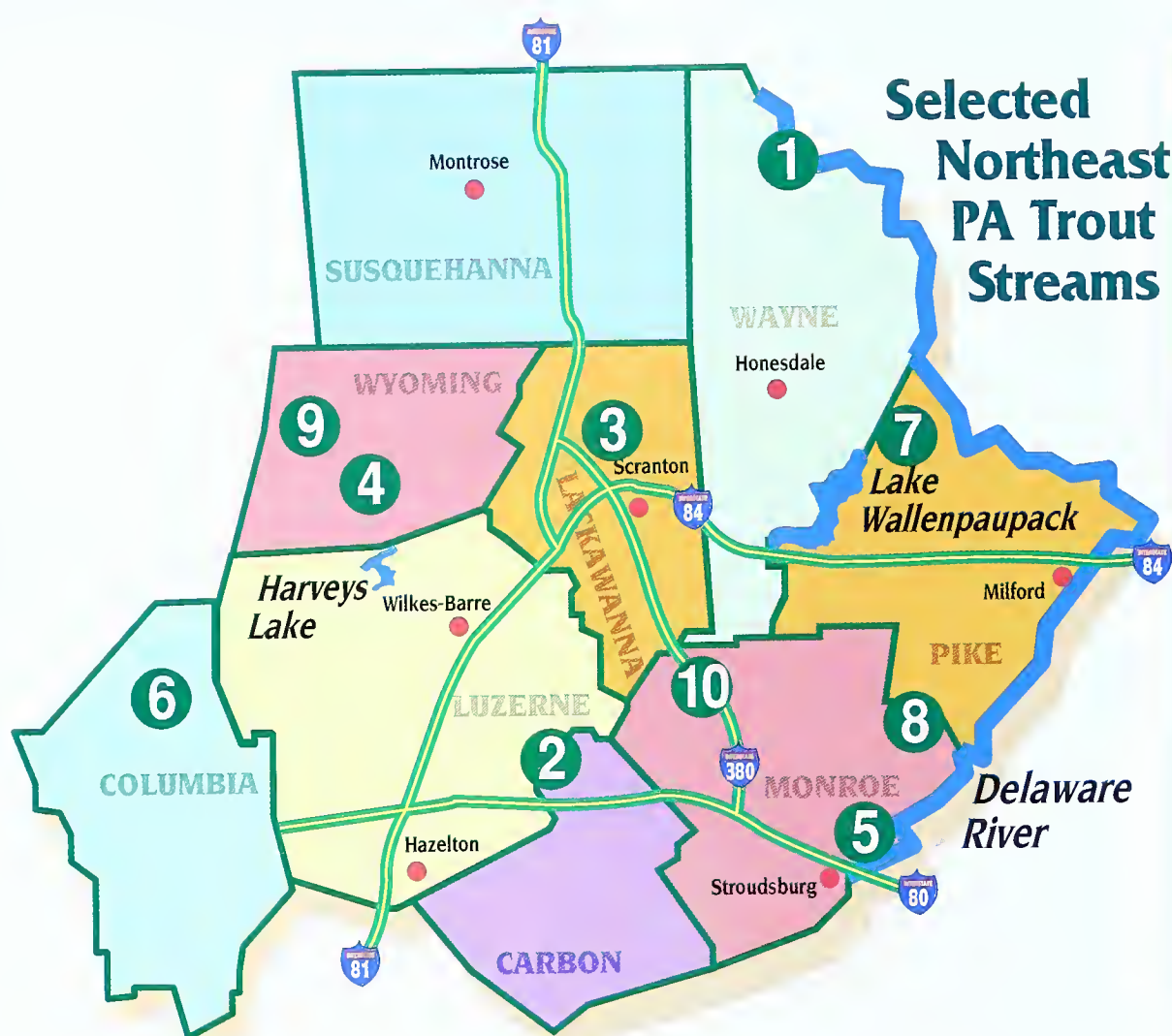
Fishing Creek

I still remember the fishing trips I took to Fishing Creek near Benton every evening in late June. On some of the slower sections I matched the yellow and golden drake hatches. I can still remember that cold water. Even in midsummer, temperatures on the stream above Benton stay in the low 60s.

You'll find special-project catch-and-release water in the Grassmere area. The upper end of the stream suffers from some acid deposition and the hatches and quality trout fishing there have suffered.

In addition to yellow drakes, you'll find some other hatches worthwhile to match. You'll find some tricos and sulphurs especially from Benton downstream to Stillwater.





Selected Northeast PA Trout Streams

- 1. Delaware River.** You can access the river at Balls Eddy, two miles east of Winterdale at the Commission's Ball's Eddy Access.
- 2. Lehigh River.** Above and below the Francis E. Walter Dam.
- 3. Lackawanna River.** Archbald to Olyphant.
- 4. Bowman Creek.** Wyoming County.
- 5. Brodhead Creek.** Monroe County, from Analomink downstream.
- 6. Fishing Creek.** Columbia County near Benton, and special-project catch-and-release water in the Grassmere area.
- 7. Lackawaxen River.** Pike County, Kimbles to Rowland.
- 8. Big Bushkill Creek.** Monroe County, near Resica Falls.
- 9. Mehoopany Creek.** Wyoming County, just above and below Forkston.
- 10. Tobyhanna Creek.** Monroe County, just off PA Route 423 west of Tobyhanna.

This freestone stream averages 40 to 50 feet wide and holds some heavy riffles and deep pools. PA Route 118 crosses the upper end near Grassmere.

Lackawaxen River

Because of its location the Lackawaxen River doesn't get the attention it deserves. It empties into the Delaware River where most people flock to fly fish. Anglers from nearby Hawley recognize the potential of this river.

If you want to see the Lackawaxen at its best, then you should fish it early in the season. The Lackawaxen holds one of the heaviest hendrickson hatches I've ever witnessed. I've seen the hatch appear as early as the opening day of the trout season. The hendrickson on this river lasts for a good week appearing every afternoon around April 20.

The river flows into the Delaware river at Lackawaxen. I enjoy fishing the section from Kimbles to Rowland. Here you'll find some deep pools and heavy riffles. SR 4006 parallels much of the road below Lake Wallenpaupack.

Big Bushkill Creek

If you want to see a great early season blue quill hatch, you have to fly fish on the Big Bushkill in late April. This stream holds some great early season hatches, but none is better than the blue quill that

appears in mid-April to late April. When you hit the blue quill on this stream you're in for several fantastic hours of matching the hatch. If you miss this hatch you might hit the hendrickson, which also emerges about the same time.

The Big Bushkill reminds me of one of dozens of Pocono waters with its dark-brown tannic waters. The stream holds some extremely productive riffles and pools just downstream from the Boy Scout camp near Resica Falls. The water ranges from 40 to 50 feet wide and much of it can be reached from the Boy Scout camp only by hiking into the stream. PA Route 402 crosses the stream.

Mehoopany Creek

For five summers I fished the Mehoopany Creek weekly. I especially enjoy fly fishing the section just below Forkston upstream for a few miles. Like so many area streams, Mehoopany Creek has been affected to some extent by acid rain, which in turn has reduced the number of hatches found on the stream.

I'll never forget the heavy blue-winged olive dun hatch I saw one morning on that stream. It happened in late May just below Forkston. Suddenly the entire stream came alive with blue-winged olive duns. A size 14 Blue-Winged Olive Dun pattern took more than 20 trout during that hatch.

I enjoy fly fishing the upper end of

Mehoopany Creek above Forkston. SR 3001 parallels much of this part of the stream. Don't overlook some of the tributaries to the Mehoopany. Streams like Kasson Brook, Henry Lott Branch and Somer Branch hold trout. You'll see a lot of small native brook trout in this area and some spectacular scenery.

From Forkston downstream you can access the stream on PA Route 87. This freestone stream averages 40 to 50 feet wide and holds some deep pool and riffles. In some areas you'll find deep pools with overhanging ledges. I've found these areas especially productive during the summer.

Are there other streams in the northeast worth fly fishing? You bet there are! Tobyhanna Creek just off PA 423 holds some excellent early season fly fishing. Hit this stream when the hendrickson appears and you're in for an exciting day.

Would you like to see some spectacular scenery, some great trout fishing—and maybe throw a hatch in for an added bonus? Why not try one of northeast Pennsylvania's trout streams? No, you won't find the cold limestone streams of the central or southcentral part of the state. But you will find some great matching-the-hatch opportunities and some memorable days of fly fishing. Especially in spring these northeastern Pennsylvania streams hold some great hatches and great fishing opportunities.

ALL ABOUT HOOKS

by Darl Black



Funny how some things become imprinted in one's memory. I distinctly recall one summer day, when I was very young, taking a piece of string, a stick, a squirming garden worm and going "fishing" in a small brook that bordered the yard between our house and my grandparents' place.

Grandpa Black came over to see what I was up to. "You ain't going to catch anything without a hook," he said in a matter-of-fact tone. Realizing a hook was a critical piece of equipment, I asked my mother if I could get one from my dad's tackle box. The answer was no. It was only then I realized no fish would be caught that day.

Since then I have fished in a lot of brooks, creeks, rivers, lakes and reservoirs—and I've handled a lot of hooks. An angler can get by without a boat, motor, electronic devices and fancy lures, but a rod, reel, line and hook are integral to catching fish. As my grandpa pointed out, without a hook you won't catch a thing.

As important as a hook is to fishing, it is surprising how little attention many anglers give to this skinny piece of steel. It's no wonder the old adage that 20 percent of the anglers catch 80 percent of the fish probably still holds true.

All hooks are not the same. There are differences in the type of eye, length of shank, shape of bend, style of point and width of the gap. Hooks used for hard baits and plastic worms are entirely different from those used for live bait. Characteristics that make a good live bait hook for panfish do not necessarily make a good live bait hook for larger fish.

High-tech hooks

In recent years there have been immense improvements in hooks. The focus has been on improved steel technology, which makes stronger and lighter hooks with more detail to point design, and radical designs in the actual shape of the hook.

"These days I never use the older soft 'wire-steel' hooks. I only select the newer hardened alloy steel hooks," says bass angler Lee Duer emphatically. "Wire-steel hooks are the standard hooks on the market. Some may claim special sharpening processes, but that sharpening is meaningless if it can't hold the point. Every hook manufacturer will be offering high-tech alloy hooks soon."

Besides a dozen years of angling expertise, Duer speaks with authority on metal, based on 10 years of experience as a buyer of engineered steel products for a large industrial firm.

"The hardest hooks are those with high carbon content, or nickel/chrome alloys," Duer says. "Names to look for are Gamakatsu, Daiichi, Owner, Fenwick Triple Sharpened, Weapon, VMC Vanadium and Mustad Pro Select line. These are high-priced hooks, but when dropping below this level you enter the realm of standard wire-steel hooks."

How do you know when a hook is a high-tech steel hook? Duer suggests placing the point at a slight angle on a very hard surface like a marble countertop, and then pushing with your thumb against the hook trying to drive the point into the surface. If the point curls even a little bit, it is soft steel and thus will not hold a sharp point.

Hooks generally have either a conical point that looks like a sharpened pencil, or a cutting point that provides a knife-like edge on the inside of the point. Which is better? This is a raging debate among anglers, thereby creating a major selling feature for hook manufacturers.

"The conical point makes a very sharp point," says Kentaro Hara, General Manager for Gamakatsu hooks. "It's the point that has been used in Japan for a long time. Similar to a needle, the conical point makes a small puncture hole that does not tear additional tissue as a cutting edge does. A conical point com-

bined with a small barb creates a hook that penetrates with the least damage, and thus holds the fish securely."

Of course, not every manufacturer agrees. "Because there are advantages to both conical needle points and cutting points, Mustad offers both to meet angler desires," says Skip Mortensen, Sales Coordinator at Mustad. "Nothing beats the needle point for the least amount of force required for initial puncture. Needle points are very sharp on tip, but as you move back from the tip, they just get fatter. On the other hand, deeper penetration is obtained with a triangular cutting point. Through testing we have calculated our knife edge penetrates 2 1/2 times faster than a conical point."

VMC, another of the hook giants, weighs in with a combination approach. According to Bill Finck, Sales Manager at VMC, "The cone tip is best for sharpness and the cutting edge is great for penetration, so we combined both ideas in our Cone Cut Point. The very tip of the point is cone-shaped for best sharpness, but the tip merges into a cutting edge for better penetration."

Bait hooks

Basic concerns to keep in mind when selecting bait hooks are: the barb, choosing a hook that keeps the bait alive and natural-looking, and a hook gap slightly wider than the bait (particularly important when using any bony head minnow forage).

Recommending a barbed hook may seem odd to anglers who would never consider using a hook without a barb. But exactly what purpose does a barb serve? "Keeps you from losing a fish," someone responds. Not so! Anglers across the nation land fish on barbless or de-barbed hooks every day.

The barb on a hook was created for one purpose—to keep bait from slipping off. The barb should be no larger than is necessary to keep the bait from sliding off during casting and retrieving.

When using live bait, the angler counts on the action of the minnow, worm, leech, grub or cricket to help attract fish. Keeping the bait alive and natural is partially accomplished by using the thinnest wire hook as practical.

Gap, the distance between the point and the shank, is a tricky measurement. You may believe that any hook of the same size has the same gap. However, manufacturers offer some hook styles with an extra-wide gap. For example, Kahle-style bait



From casual baitfishing to extreme cranking, the single most important step an angler can take to increase the hooking ratio is to keep the point sharp. There is absolutely no question that standard wire-steel hooks must be sharpened right from the package and frequently touched up during use. It is debatable whether sharpening is necessary for hardened high-tech hooks straight out of the package. However, even high-tech hooks eventually require touchup.

hooks offer a wide gap, plus a hook point in direct line of pull with the eye of the hook.

When hooking baitfish through the head, the gap of the hook must be wider than the height of the bait to allow for good penetration into the fish's mouth tissue. An extra-wide-gap hook accommodates the heads of larger baitfish like shiners, dace, suckers and chubs.

Which specific bait hooks do anglers turn to? With the small live baits typically used for trout, sunfish, crappies and perch, I prefer a fine-wire Aberdeen hook. This style is available in an extra-fine wire model, too, for extremely fragile baits like crickets, grasshoppers and larvae. The long shank of an Aberdeen is helpful when extricating the hook from tiny sunfish mouths. It easily pulls loose from snags, and can be reshaped with fingers. However, the soft Aberdeen style is not recommended for large, powerful fish.

Walleye guide Jeff Knapp says, "My standard walleye hook for fathead minnows, crawlers and jumbo leeches is the short-shank, turned-up eye, beak hook in sizes 4 and 6. This hook looks like a salmon egg hook. Examples are the Mustad 92568BLN and VMC V7356 BN. These are strong hooks, but fairly unobtrusive once positioned in the bait—an important factor when dealing with wary walleyes. The turned-up eye makes this a perfect pick for tying snells for bottom-walking rigs, as well as for crawler harnesses."

However, other anglers desire a wider gap hook. "For river walleyes and smallmouths, I trap

baitfish from the creeks or river," says angler Rob Genter. "These shiners and chubs are considerably larger than store-bought fatheads. With baits ranging from four to six inches in length, I prefer wide gap hooks in sizes 4 to 1/0. The Eagle Claw L42 or L141 are a couple of my favorites."

Hook choice varies considerably depending on species and bait. For example, when using corn or doughballs for carp, I prefer a small treble hook, usually a size 10. This choice is based on the small muscular mouth of the carp, as well as the fact the hook can be hidden in the bait.

But when the quarry is big channel or flathead catfish, finesse hooks must be left at home. Trophy cats (those going well over 10 pounds) call for an extra-strong hook with a big bite. With live or dead chubs up to 12 inches, hook size may range from 1/0 to 6/0. My picks are Eagle Claw L144R and L151W—tapping a supply of hooks purchased in Florida when

fishing live shiners for big bass a few years back.

Hook shapes for soft plastic

Even though hooks purchased for live or prepared bait are probably number one in retail demand, hooks used for soft-plastic lures are likely number two in tackle shop sales. Soft plastic includes all sorts of shapes used in dozens of different riggings for every species of fish that swims.

Not too many years ago with only plastic worms and lizards on the market, "worm" hooks were limited to about three styles. However, the explosion of different soft plastics in recent years has been followed closely by a proliferation of strange-looking hooks to energize these new baits. There are so many specialty hooks (most made from the high-carbon steel) on the market that it is impossible to track them without a guidebook.

In addition to hooks for all sizes and shapes of worms, there are hooks specially designed for lizards, crayfish, tubes, French fries, grubs, reapers and soft stickbaits. Some have special locking features to hold a plastic bait in place. Others have an unusual angled wide bend to increase hook penetration. Still others have lead molded to the shank to create a special action.

A traditional "worm" hook works fine for the traditional Texas rig. However, when experimenting with new shapes and techniques, try a hook designed for the specific type of plastic bait you're using. A specialty hook enhances the presentation and increases the percentage of successful hookups.

For example, when Texas-rigging a plastic worm, I prefer a round-bend offset shank hook. The round-bend reduces balling of the worm at the bend, which happens with sproat bends. However, when Carolina-rigging lizards or jerking soft stickbaits, I always choose one of the newer extra-wide-gap offset hooks with a big belly in the shank to accommodate fat plastic.

Also for soft stickbaits, there are specially weighted hooks that make the bait swim away from the angler. Other weighted hooks make a plastic crayfish sit up. For light-line splitshotting with grubs and reapers, there are extremely strong, fine-wire hooks. Hooks for tube lures include models with special appendages to lock the hollow plastic in place. Other hooks have lead molded to the shank near the eye so the weight can be hidden inside the plastic. There is a special hook for every imaginable presentation.



Gap, the distance between the point and the shank, is a tricky measurement. You may believe that any hook of the same size has the same gap. However, manufacturers offer some hook styles with an extra-wide gap. A wide-gap hook accommodates larger baits so that you can hook the fish more efficiently.

Treble hooks for hard baits

Treble hooks for crankbaits, jerkbaits and other hard lures have also undergone radical changes. At one time there was simply a standard bronze treble. Today treble hooks are available in hardened high-tech steel with advanced conical or cutting edge points, identical to the soft-plastic speciality hooks. Even the bends in treble hooks have been transformed.

At first, there was a move away from the sproat bend to round bend. Round-bend trebles provide a wider gap and are credited with improved hooking ability. Then the Excalibur rotating treble was introduced, with a claim of deeper penetration. Next, VMC came out with an outbarb treble. This season, Mustad shocked the fishing world with a weird-looking treble most anglers said could not possibly work.

"The Triple Grip features a wide gap with a unique bend that turns the point of the hook inward," says Mortensen. "The elbow bend provides a hold-tight design that significantly reduces the fish's ability to throw the hook."

Because the points are turned inward, at first glance most anglers believe the Triple Grip cannot possibly hook a fish. After all, they have been conditioned for years to bend the

point outward for a better bite. However, these points are in a direct line of pull with the eye of the hook, thus providing it a high hooking percentage. Personal experimentation convinces me the hook does what the manufacturer claims—it holds fish better than ordinary trebles.

Critical sharpening

From casual baitfishing to extreme cranking, the single most important step an angler can take to increase the hooking ratio is to keep the point sharp. There is absolutely no question that standard wire-steel hooks must be sharpened right from the package and frequently touched up during use. It is debatable whether sharpening is necessary for hardened high-tech hooks straight out of the package. However, even high-tech hooks become dull after prolonged use and require touchup.

"I sharpen every hook before use," says Duer. "I prefer true conical points with small barbs because these make a smaller entry hole. However, to get the penetration with a conical point, it is very important to have them extremely sharp. A hook file should not be used on a tapered conical point. Instead, I use a

There have been many innovations in hooks for soft plastic. They are (top to bottom) straight shank, offset shank, extra-wide gap offset shank, appendage to lock plastic in place, lead on the shank to fit inside a tube bait, and lead on the shank to make a soft stickbait swim backward.



pocket diamond-dust sharpening rod with a 'V' groove in it, stroking all sides of the needle point evenly through the groove."

Cutting or knife points require a file to achieve appropriate sharpening. However, the unique spoon-shaped cutting point on some Owner hooks cannot be touched up with a file.

On standard wire-steel hooks, I prefer to create a pyramid-like cutting point. First I run the file along the two inside cutting surfaces of the hook point. Then, instead of leaving it triangle-shaped, I create two new cutting edges on the top of the hook. The final step is to touch up the very tip with a grooved diamond-dust sharpening rod. After sharpening, I spray all hooks with a liberal coating of WD-40 to discourage rusting.

"You miss a lot of fish when your hooks are not sharp," Duer says. "Hooks must be so sharp that they actually stick to your

skin without any pressure—sticky sharp. I like to tell anglers that hooks are not sharp enough unless you are scared to come within two inches of them. That is what I mean by 'sticky sharp'—they jump out and grab you."

Chemical sharpening?

Several manufacturers say their hooks are chemically sharpened. What does that mean?

"Chemical sharpening is a bit of a misnomer," Mortensen says. "Actually, it is chemical polishing. Chemical sharpening does not take a dull hook and make it sharp. It does, however, take a sharp hook and make it sharper. Our hooks are placed in a chemical bath that removes microscopic imperfections and improves resistance to rust."

However, a spokesperson for VMC says chemical sharpening robs the steel of carbon and weakens the hook. "Sharpness and penetration are a mechanical problem for which VMC has a mechanical solution," says Finck.

Innie, outie, or none at all?

Inside barbs (on the inside of the hook point) have been standard. However, several manufacturers have introduced an outside barb on some models. The claim is that the outside barb makes for easier penetration.

According to Bill Finck of VMC, there are advantages to the outside barb in certain situations. "The outside barb penetrates easier and holds better only on fish caught in the flesh. But for fish caught in bone or hard cartilage, it makes no difference. In addition, outside-barb hooks are easier to remove, thus making them great for catch-and-release fishermen."

I believe in micro barbs or no barbs. It's a law of physics—big barbs require more force for complete penetration. Many lost fish can be attributed to a hook

not obtaining penetration past the barb. Fish are not easily lost once the hook penetrates to the bend. With no barb or a very small barb, full penetration is easier.

Another law of physics—a big barb tears a larger entry hole than a barbless hook. A larger hole increases the chance of the hook falling out if the fish is given slack line.

Except for bait hooks, I have been de-barbing all my hooks on lures for over two years with nothing but positive results.

VMC and Gamakatsu have introduced barbless treble hooks to make for easier removal of crankbaits and stickbaits from gamefish.

Barbless hooks are safer for humans, too. Many anglers who travel to remote areas of Canada have made it a practice to de-barb all their hooks for safety reasons.

ANGLER

A man wearing a hat and waders is fishing in a shallow creek. He is holding a fishing rod and a net, and a fish is visible in the net. The background is a dense forest of green trees.

Our Overlooked Creeks

by Mike Bleech

Some of my happiest days have been spent along creeks. I don't mean famous creeks like the Yellow Breeches or Penns. I mean nondescript creeks that escape the attention of the angling mainstream. I'm talking about creeks that may get quite a bit of attention soon after visits by trout stocking trucks, but may get too warm for trout during summer, and creeks that flow through towns and neighborhoods, and maybe farther upstream through tangled bottom land. I also mean creeks where a kid can explore, and learn how to find bait under rocks, and where grownups can go to relive their youth.

Sadly, the once trampled paths that followed the courses of our creeks have been reclaimed by the jungle-like vegetation that borders them. Kids today have far too many distractions to hear the beckoning of bullfrogs and bullheads. Most would rather shove their way through a crowded mall to get to the fantasy world of a video arcade instead of crawl down a steep bank through briars and stinging weeds to be part of the real natural world along a creek.

Last summer fellow middle-ager Worth Hammond and I visited his old family farm near a village on the banks of Brokenstraw Creek. As we walked along the creek where he hiked and camped and fished as a boy, he pondered the changes of time.

"There were beaten-down paths here when we lived on the farm," he recalled. "I camped on that flat spot. Now there aren't any paths, not even a footprint."

Nor were any kids at the local ballfield, or playing on lawns.

It seems as if the spirit of adventure is fading. Or is it just lacking inspiration? As the outdoor media—magazines, television and videos—glamorize professional an-



Sinnemahoning Creek

glers, high-tech fishing and the big-name waters, the creek that flows behind the mall or along the back side of the pasture is being ignored. How can a kid be expected to wonder if the carp are biting at the old fishing hole while some instant television fishing superstar is catching another 10-pound bass at Lake Okeechobee?

Secrets of creeks

Overlooked creeks are scattered everywhere in Pennsylvania. Finding them is not difficult. But by their nature, finding fish in them is challenging. The reason these creeks are overlooked is because the glamor fish are not abundant throughout, or maybe not big enough to compete with television fish. At least, this might be the general impression most anglers have about them.

Sometimes only part of the creek fits this category. Many creeks are stocked with trout during spring, but are too warm for trout during summer. Many creeks support season-long trout fishing in their headwaters, but the lower reaches are too warm for trout. Some creeks have stretches with adequate water quality, and stretches where pollution prohibits fish.

In most of these creeks there are long stretches where fish worth hooking are scarce. During low summer flows these stretches may get too warm, they may be too shallow, and water quality may be poor. Perhaps during spring and fall fish are scattered through most of the creek, but during summer the fish congregate in a few select locations. While the fish are scattered, there might not be enough fish to make fishing worthwhile. But when all the fish are congregated in those few locations, fishing can be excellent.

You can expect to find a variety of sporty warmwater fish in these creeks, both smallmouth and largemouth bass, several species of sunfish, perch, white bass, bullheads, catfish, chubs, suckers, carp, walleye, and northern

pike, chain pickerel and even muskellunge. You might also find an occasional brown trout.

As a kid I found the honey holes by exploring. I had all the time in the world. Now, after several decades of exploring creeks, I can say confidently that the way to go about finding these creek honey holes is... by exploring.

Now, however, I have a better idea about what to look for. To become intimate with creeks you must understand their nature. What is it that makes fish avoid

long stretches? What is it that creates honey holes?

Several factors make long stretches of creeks virtually uninhabitable to fish. Sometimes one factor is enough, sometimes various factors combine. See if you can identify any of these factors in your local creek: 1) too shallow; 2) too warm; 3) low oxygen; 4) pollution; and 5) lack of cover.

Understanding these factors can lead you to the places where these ingredients are eliminated.

Many creeks in Pennsylvania have been channeled to help prevent flooding. During normal summer flow these channeled areas are featureless shallow stretches. A few creeks are naturally this way. The only fish that inhabit these areas are minnows and other small fish that can hide among the rocks and other bottom debris, and perhaps a few suckers. If there are any deep pockets in these stretches, all the sport fish that inhabit the shallow stretches during higher flow will retreat into the deep pockets during low flow.

Look for logs that have been washed in during high water. Water flowing over the log may gouge a deep hole below it. Exceptionally high flows gouge deep holes. Explore for new honey holes each spring. The flooding that occurred last January because of snowmelt and ice jams certainly changed the bottom structure of many creeks. Look for new deep troughs and holes created by swirling water.

In addition to the problem that larger fish can't find adequate cover in long shallow stretches, these areas warm quickly. Any water that is not shaded will warm quickly, particularly if it is shallow. If this is the case, look for places where the water is cooler—where cool tributaries enter the creek, or in the shade of overhanging trees. Some creeks have many underwater springs. In combination with cooler water, look for a deeper hole, perhaps near the undercut roots of the overhanging tree.



photos-Mike Bleech

Some type of cover figures into most honey holes. You seldom find sport fish, especially the larger fish, in any water where they can't escape the sight of predators. Log jams make excellent cover for just about all fish. Undercut root systems can hide many surprises. Boulders, rock piles and rock ledges are excellent places to look for fish. Usually a combination of cover and relatively deep water creates the best creek fishing holes, but just depth alone may be enough. In long, shallow riffles, look for the places where the bottom disappears.

To the credit of all Pennsylvanians, our water quality has generally improved during the past couple of decades. Still, there are many polluted creeks. Some of the worst are not worth fishing. But some of the marginally polluted creeks harbor fish populations. In these creeks, the pollution is most noticeable during low-flow periods when the pollution is not adequately diluted.

These creeks can be approached in several ways. One way is to fish above the source of pollution, such as farm runoff, mine drainage, warm water discharge, industrial waste or municipal pollution. Another way is to fish where pollution is diluted by clean water from tributaries.

Another creek type has long, slow-moving, soft-bottom stretches. You might find carp and bullheads in this water, but without adding cover you'll probably find not much else. Typical cover in these creeks is aquatic vegetation, undercut root systems and log jams. Close to this kind of cover you are liable to catch pickerel, largemouth bass, catfish, northern pike and maybe muskellunge. Because there is a lot of water for them to roam in search of food, there might be quite a few bass, pickerel, pike or sunfish in one mass of cover.

In a few creeks where most anglers are happy with 8-inch bullheads, I have found 10-pound channel catfish by fishing large chubs right in log jams. Most anglers never know about these big catfish in creeks because they do not use tackle stout enough to haul the big catfish out of the tangled cover. I suggest at least 20-pound-test line and a stiff rod. Sometimes it might be necessary to fish at night to tempt these big catfish.

Smallmouth bass and walleyes might congregate anywhere a riffle breaks up a long, soft-bottom stretch. Riffles aerate the water and concentrate certain food.

Hidden rocks and gravel attract gamefish such as smallmouth bass and walleyes in otherwise soft-bottomed stretches.

Smallmouths in particular do not inhabit soft-bottom water. These hard-bottom breaks are generally in areas where the current is a bit faster than over the soft bottom—not necessarily a riffle, perhaps just where the banks squeeze closer together, or along the outside of a bend.

Several of our creeks have excellent smallmouth bass populations, but they do not attract many anglers because the smallmouths rarely grow larger than 14 inches. A day on one of these creeks with a fly rod or ultralight spinning rod when the bass are active is truly one of the greatest fishing experiences. Wading in sneakers and shorts makes it a wonderful way to beat the summer heat. Nothing prevents you from taking an occasional dip in the cool water. Even 78-degree water feels cool on a blistering hot day.

Many creeks have adequate depth for canoeing. You might have to walk the canoe through a few shallow stretches, but this is part of the fun.

The headwaters of one creek less than an hour's drive from my home meanders

through a large swamp. I have explored the depths of this swamp in a car-top boat. Some of the creeping, crawling and slithering critters encountered in the swamp are unpleasant. Any of them may drop on you as you shove through willow branches. All I have caught in this swamp were a few modest-size largemouth bass, but I have seen some territory few other people have ever seen.

Creek fishing can be serious adventure. Creeks are often surrounded by dense vegetation, swamps, steep banks and other natural barriers that make them havens for wildlife. Instead of competing with other anglers, you may compete with mink, water snakes and herons.

Fishing can be anything you want it to be: Competition with other anglers, a quest for the biggest, the art and science of fly fishing. Or it can be an escape from the rat race. You can get away from the pressures of civilization along hundreds of miles of creeks, some hidden right in the midst of urban and suburban sprawl.

ANGLER

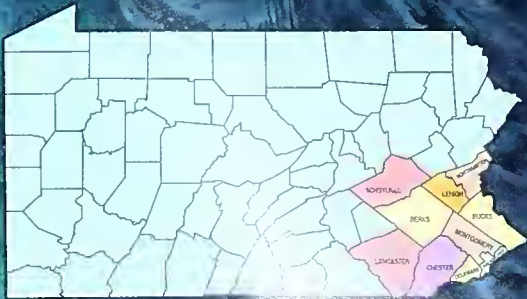
Some of Our Overlooked Creeks

(bh=bullhead, cc=channel catfish, lmb=largemouth bass, m=muskellunge, np=northern pike, pkl=pickerel, rb=rock bass, s=sauger, sf=sunfish, smb=smallmouth bass, tm=tiger muskellunge, w=walleye, wb=white bass)

Waterway	County	Fish
Middle Creek	Union, Snyder	smb
Muncy Creek	Lycoming	smb
Bald Eagle Creek	Centre	smb
Sugar Creek	Bradford	smb, rb
Towanda Creek	Bradford	smb, rb
Wyalusing Creek	Bradford	smb
Tunkhannock Creek	Wyoming	smb, sf
Fishing Creek	Columbia	smb
Lehigh Canal	Lehigh	pk, sf
Conestoga Creek	Lancaster	smb, tm
E. Br. Perkiomen Creek	Montgomery	smb, sf
E. Br. Octoraro Creek	Chester, Lancaster	smb
Maiden Creek	Berks	m, tm, np
Tohickon Creek	Bucks	smb, sf, bh
Sherman Creek	Perry	smb, sf, pkl
Swatara Creek	Dauphin	smb
Tuscarora Creek	Juniata	smb
Conewago Creek	York	smb, sf
Licking Creek	Fulton	smb
S. Fork Tenmile Creek	Greene	smb, sf, s, cc, wb
Buffalo Creek	Armstrong	smb, sf, s, cc, wb
Enlow Fork	Greene	smb, sf
Loyalhanna Creek	Westmoreland	s, w, cc, bh, smb, lmb, sf, wb
Neshannock Creek	Mercer, Lawrence	smb, sf
French Creek	Erie, Crawford, Venango	smb, sf, m, w, np, bh
Cussewago Creek	Crawford	m, lmb
Brokenstraw Creek	Warren	smb, w, np
Conewango Creek	Warren	smb, w, cc, sf, np, bh

Southeast PA's Summertime Smallmouths

by Vic Attardo



The daily movements of smallmouth bass in rivers and streams during the hot summer can exasperate you into believing the fish aren't biting, when indeed they are biting, but in another location. I don't consider locating stream or river smallmouths a hard task. They have their preferences for riffles, tail-outs and current seams, as other gamefish. And even though they take advantage of weed beds, fallen timber and rocks, they're not much for hiding beneath undercut banks like brown trout. I consider smallmouths to be solitary hunters, only infrequently schooling to drive prey.

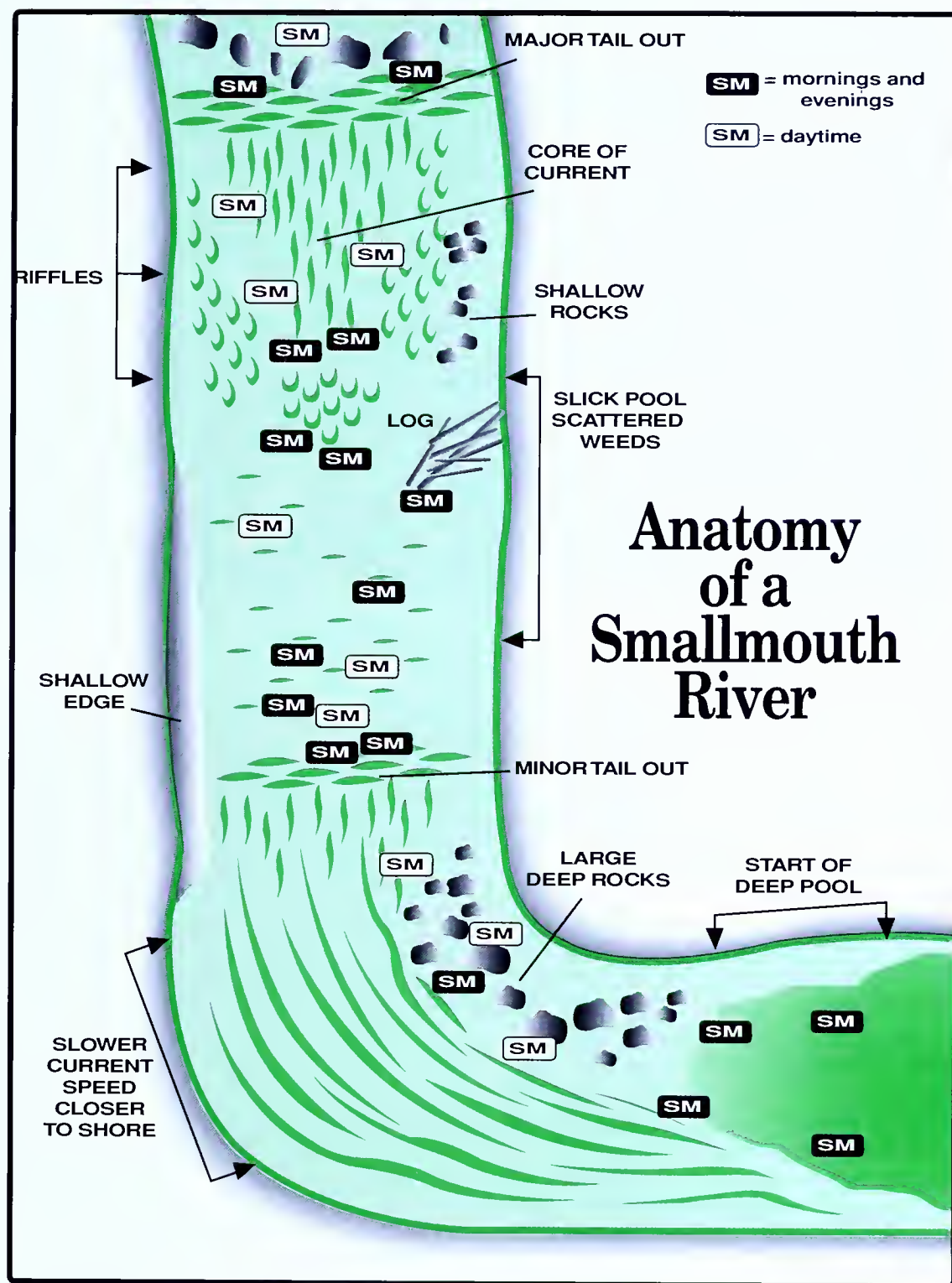
Still, there are times when the smallmouth's need to feed centralizes them in specific locations. Knowing these good summertime spots can increase your chances of catching river bass.

On my homewaters of the Delaware River, I often find it necessary to explore thoroughly, from one day to the next, a wide range of river structure to discover where the fish are feeding.

For instance, in the evening, bass have a tendency to move up to the head of a riffle to feed, especially in water temperatures over 75 degrees. The size of the fish I catch in these zones is relatively small. The shallow geography offers little cover for big fish. But if bass aren't active in the warm pools, I know I can find some fish around the upper lip of a riffle or in the center gut of a deep riffle.

Another key evening spot during the hot summer is the tail-out below a long pool. During mid-day you could fish the extreme end of a tail-out and catch a few bass. But the numbers of fish won't be great because these bass are the sole owners of good hideaways in the tail waters, spots that are indeed limited. However, when the sun begins to shrink, or fall behind an adjacent hill, large numbers of bass move out of their deep-water holes and take up stations in a tail-out where they feed like lions. If you continued to fish another part of the river during this time, you might still catch fish, but not as many as you would if you had moved with the bass.

Back on the Juniata River last year, I was amazed by the number of smallmouths that trucked into the deeper end of a long riffle during feeding times. I studied the location and I realized that part of its attraction was that the spot showed a marked difference in current speed. About 20 feet upstream from my honey hole, the riffles flowed with faster, white-edged water, but toward the end of the riffle, the water smoothed and appeared noticeably slower. In this spot the bass were on the feed in the



morning and again in the evening. They ganged up here to take late-day hatches of caddises, the white mayfly and various mayfly drakes.

Just below the end of the riffles was a pool that held the deepest water in the general area, about 6 feet deep. During the day I could work through the tall, current-flattened weeds and take a few bass. But at the peak feeding times, early morning and evening, the fish moved up from the slower sections of the pool into the slower end of the riffle. The bass moved upstream to take advantage of nymphs, crayfish and stonecats that became active in low-light conditions and were sometimes washed away by the current.

When the bass were in the better parts of the riffle, they were aggressive and willing. At the same time I would look back to the pool to watch mayfly duns and spinners going downstream, and see only a few bass rising to the surface. Clearly the big banquet was served in the riffles, not by the pool.

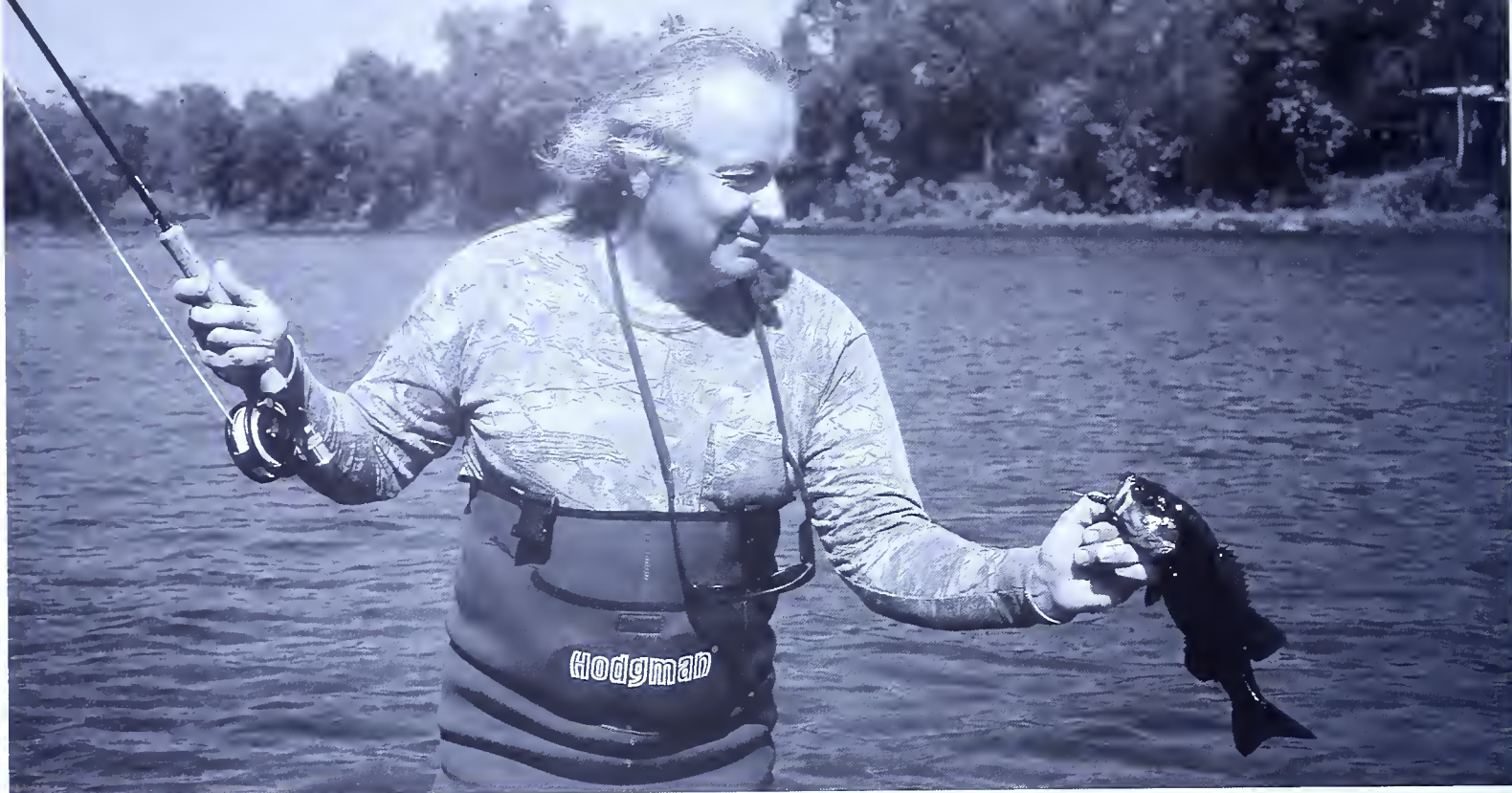


photo: Vic Attardo

How hot is hot?

Of course, water temperature plays a key role in the daily movements of summertime bass. As noted, bass faced with water temperatures over 75 degrees will move to faster, more oxygenated water. Under these conditions, you must fish faster water in either a riffle or a tail-out to find willing fish.

However, after the sun has been down for a few hours and the bass are accustomed to the nighttime scene, I take my best fish under the stars from deep pools. This is slow, deliberate fishing with either surface poppers or crayfish and stonecat patterns crawled slowly across the bottom. I particularly like to fish a pool when there is only a hint of light in the morning sky. In this way I took a pair of 4-pound bass one morning last August when everyone said it was too hot to catch big fish.

Of course, the conditions were perfect for that morning fling. The air temperature had dropped about 10 degrees during the night, and with the sun off the water, the liquid temperature had also fallen a few degrees. I caught both fish by crawling a black and orange Woolly Bugger back toward me against a shoreline drop.

Later in the summer, many weeds that have thrived in our rivers begin to die out. Bass that have clinged to these areas for cover move out and find new daytime homes. This centralizes a lot more fish into the prime areas. Bass stationed in deep riffles and deep tail-outs need to be quick on the draw, because the current pushes their food along at a faster speed. In these places I like to present streamers and large nymphs that bass can smash and grab. I've tried using small patterns in deep water, and guess what? I caught only small fish.

Lions on the plain

One piece of real estate that anglers should watch both day and night in the summertime is a flat section of shallow, shoreline water immediately adjacent to deep water and a good current. Ideally the boundary between shallow and deep water should occur abruptly and near your wading point. It also helps if the shoreline is flat and grassy.

What anglers are hoping to experience in these spots is a hair-raising connection with a marauding smallmouth. In the flats the backs of large bass can be spotted cutting through the surface as they chase minnows and fry against the shore.

This minnow-chasing can occur day or night, but it most often occurs in the evening. The scenario begins as the light starts to fade. The smallmouths have moved toward the shallow flats. Suddenly a school of minnows swims into the smallmouth's territory and it goes ballistic. The minnows are trapped in the thin water and start leaping across the surface in a frantic attempt to escape. The wake of the bass appears like the wake of a surfaced submarine. It's exposed tail whips the river to a froth.

At that moment, you should deliver a well-placed streamer, popper or surface lure ahead of the bass and get ready for an exciting strike. Even if the bass has managed to catch a minnow, it will continue slashing through the school, and with luck, into your offering.

But if you haven't kept your eye on locations that give smallmouths such opportunities, you'd be missing this great action.

Fly, lure selection

I do 90 percent of my river bass fishing with a fly rod, but I usually fish side by side with an expert spinfisherman, so I know the lessons of location and presentation are as applicable for one technique as another.

It probably comes as no surprise that the daily movements of smallmouths can also give an angler fits on fly and lure selection. Some things that work great when the bass are feeding slowly in the pools won't work at all when the fish have moved to a more active feeding station.

On the prowl in fertile waters, smallmouths take a collection of nymphs and dry flies, but unless there is a very heavy hatch, and sometimes in the midst of a strong hatch, I like to appeal to a fish's most aggressive instincts and show them minnow-imitating streamers.

I'm big on using high-riding streamers when bass are near the surface concentrating on floating prey. Using lightweight minnow patterns with buoyant materials like deer hair and densely packed goat hair, I present medium-size streamers to fish that are busy coming to the surface for other foods.

Over the years I've found that bass taking caddises, mayflies and winged ants don't tolerate the presence of a smaller fish, like a minnow or chub, in their feeding lane. Whether the bass is attacking the minnow as a meal or just to get it out the way doesn't matter, as long as I hook him.

During hatches, fly fishermen should consider streamers that don't swim under the fish. When bass are taking natural dries and emergers, the smallmouths have their eyes glued to the surface in anticipation, and a bottom-hugging streamer won't draw as many strikes as one that is jetting a foot or so below the water's ceiling.

When the hatch has slowed or stopped, I often change to a heavily weighted streamer because the bass are again looking on a level plain, or along the bottom, for food. As surface activity diminishes I also go back to crayfish and stonecat imitations.

On hot summer afternoons under bright sunlight, I generally fish deeper than I would under low-light conditions. Granted, bright sun and a hot afternoon are not the best times to fish, but when faced with this situation I like a bright streamer that stays tight to the bottom. For this I use my Heavy Metal Minnow, size 6.

When the fish are looking to the top, as in an evening hatch, I use my buoyant Goat Hair Minnow. The GHM is slightly weighted, but its construction is so dense that the fly won't sink below 2 or 3 feet. The GHM is a great shallow water fly, which is also perfect for those minnow-chasing bass in the flats. But I have found it to be a poor choice in water over 5 or 6 feet deep, and it loses its effectiveness in such situations.

Conversely, the Heavy Metal Minnow, with its extra wraps of lead wire at the head, sinks like a stone. It's perfect for probing deep riffles along the core of the current, but except in smaller trout sizes, it is only fair in water less than 3 feet deep. I designed both flies to fit specific niches and to use them outside their realms defeats their purpose.

Some years ago, I kept a number of stream-caught crayfish in a small aquarium for about 18 months. Two of those crustaceans eventually molted and in the course of the transformation their upper carapaces turned a gray/green color while their legs and claws were nearly a transparent-gray with small orange tips. After that observation I began tying a chenille and a foam-shelled crayfish built with gray bodies, and I have to tell you, the bass go nuts for these imitations. In building your own soft-shelled flies you will probably have to start with a light-gray material that when wet turns the desired pewter-gray color. The dark-gray materials I tried turned too dark in the water.

My spinfishing friends like three styles of lures

during the periods of peak feeding activity in mid-summer. These include minnow-shaped floating lures, weighted, in-line spinners and small safety-pin spinnerbaits.

Minnow lures are their favorite choice in slower-moving water or against shorelines. Even though they begin with a color that's a proven bass catcher, they often switch colors in one location to connect with different bass.

One of the best anglers I know routinely ties on a chartreuse and silver 3-inch minnow and then follows it with black and gold and finally a blue and silver minnow in each tail-out. You'd think that by the time he went through the water with the first two color combinations, he'd have taken every fish that was going to bite. However, the third color of the same size and shape lure usually nets him even more fish.

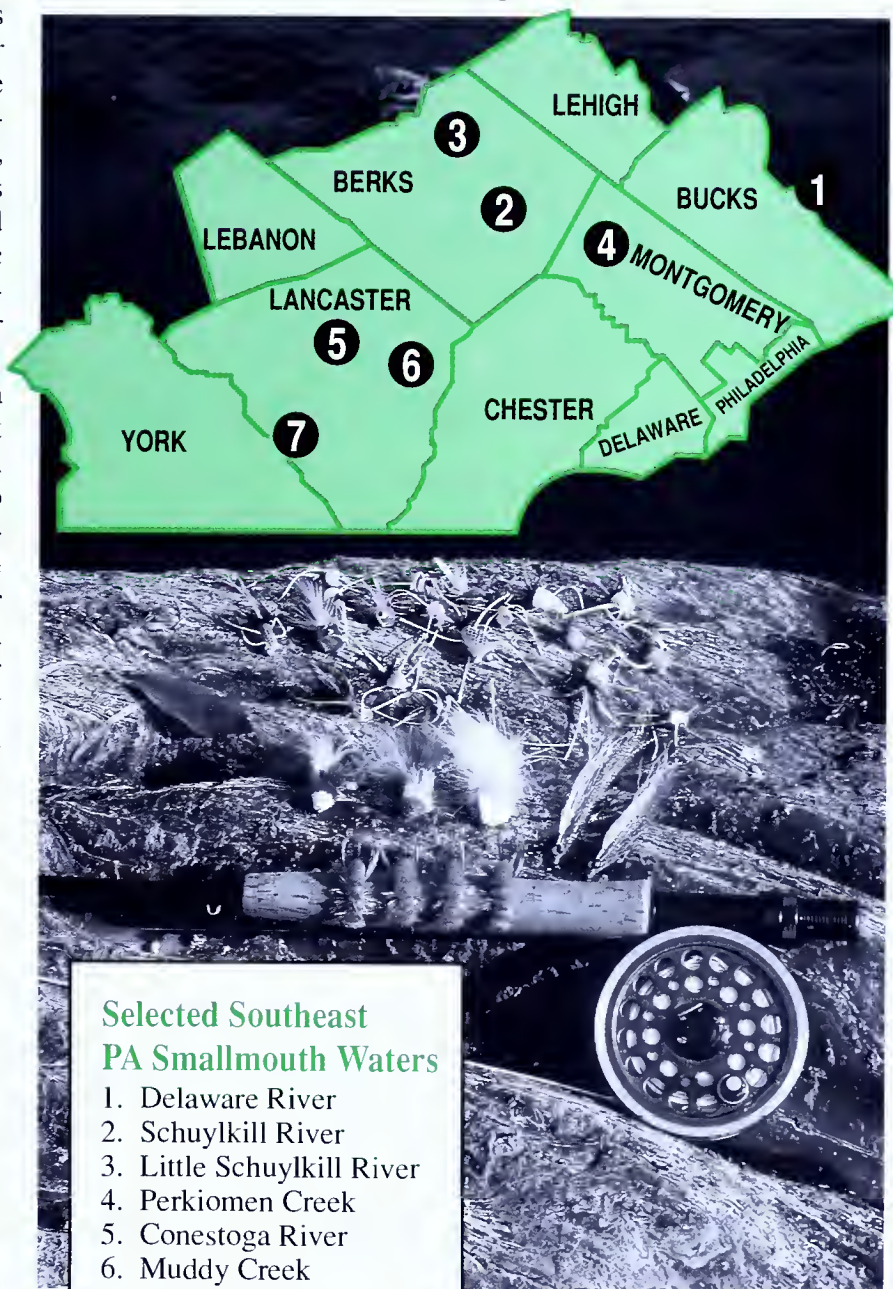
The second style lure I see the better anglers fish most often in the hot summer is an in-line spinner. Don't overlook the type that has those little plastic minnows hanging in a treble hook. They are scene-stealers.

Weighted spinners are particularly good in moderately flowing riffles. There again good anglers go through a number of different color combinations in one location. The best are black and gold, red and gold, brown and orange, and silver and white.

The third style lure that is catching a lot of bass among spinfishermen friends is a smaller version of the big spinnerbaits

popular with largemouth fishermen. A willow leaf blade, a plastic minnow body and a small jig head complete the construction. The hook rides up amidships and the bait is retrieved at various speeds to keep it off the snag-filled bottom. I see this style lure getting more and more use on Pennsylvania's rocky rivers. At the same time, my spinfishing friends are getting tired of paying an hour's wage for those deep-diving treble-hanging crankbaits that eventually end up littering the river bottom. They still use the shallow diving crankers along deep shoreline pockets, and this style lure definitely has its place in those locations.

Most of the spinfishermen I know don't like to fish jigs from shore because they hang up too often. Small jigs are best left for boat fishing. Brown and orange and lead-headed jigs with smoke-colored tails are indispensable in Pennsylvania rivers, and when placed into a boat where I can't fly cast this is what I like.



Selected Southeast PA Smallmouth Waters

1. Delaware River
2. Schuylkill River
3. Little Schuylkill River
4. Perkiomen Creek
5. Conestoga River
6. Muddy Creek
7. Susquehanna River

Correction

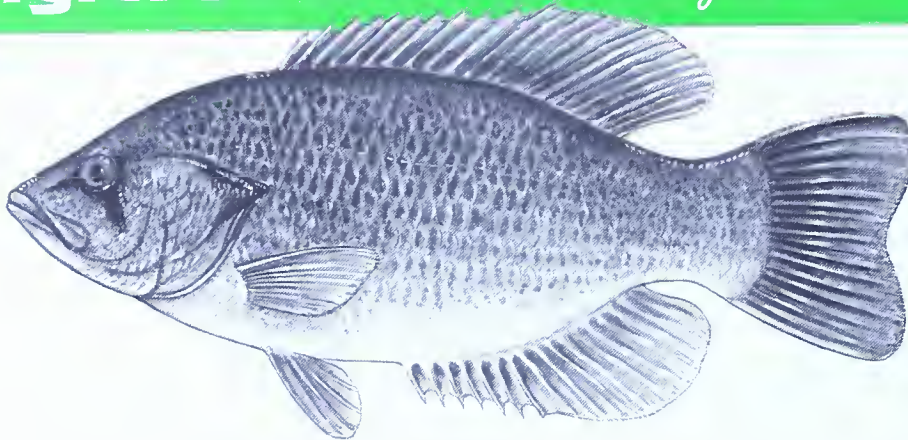
In the May 1996 *Angler* on page 16 we incorrectly stated the regulations for the Little Juniata River. There is a 14-inch, two-trout limit from opening day of the regular trout season through Labor Day on the 13.5-mile stretch from the railroad bridge at the east (downstream) end of Ironville downstream to the mouth of the river. From Labor Day to the opening day of the regular trout season the following year, no trout on this stretch may be killed or had in possession.

Regulations on the segment from the confluence with Bald Eagle Creek to the railroad bridge at Ironville (2.1 miles) include year-round fishing and a daily limit of eight trout from the opening day of the regular trout season until Labor Day. From Labor Day to the next opening day the daily limit on trout is three.

BACKTALK

The Fish & Boat Commission invites readers to write letters to the editor in this space if you have an idea on *Pennsylvania Angler* content, a question or concern about the Commission or about fish and fishing, or a helpful idea for anglers or boaters. Letters are edited for clarity and space considerations. Address correspondence to: Art Michaels, Editor, *Pennsylvania Angler*, P.O. Box 67000, Harrisburg, PA 17106-7000.

Angler's Notebook by Seth Cassell



Rock bass can be found in many of the waterways where smallmouth bass live, and although they are smaller, they offer good summertime fishing. Look for them in the pocket water of creeks and streams. Rock bass are suckers for hellgrammites, both real and artificial. They'll also strike a wide variety of trout flies and small poppers. Not only is rock bass fishing fun and exciting, but it is a great way to introduce a youngster to the sport.

Trout become more wary as summer progresses and streams become low and clear. Fly line can easily spook them, especially the bright and dark kind. Instead, try using light-colored line, such as pale yellow. Colors like these blend into the sky when a trout looks up at it. This adjustment should increase your summer trout odds.

Sitting in a flat canoe seat without back support the entire day can be terribly uncomfortable. One way to remedy this is by purchasing a stadium seat. They are comfortable, portable, have good back support, and can be used with most canoes. Staying out on the water is easier when you're comfortable.

illustration- Ted Walke

When purchasing a pair of boot-foot waders or hip boots, choose a pair that fits tightly around the ankles. This gives you more ankle support for rough wading or when you have to walk a long distance to the stream.

For those who want to increase the traction on their waders, instead of purchasing a commercial felt sole kit, make your own for a few dollars. Instead of using felt, though, use outdoor carpet. Cut it to size and use a strong adhesive, such as Aqua-Seal, to attach the soles to your waders.

Many anglers go out of their way to use a terrible-smelling catfish bait. Although they do work in most cases, these stinky baits are not necessary. A good old nightcrawler does just as well, minus the offensive odor. Be sure to put enough weight on your line to get the worm all the way to the bottom.

Bass that live in small farm ponds can be turned off by the huge lures that most anglers use on big water. Use smaller tackle and lures instead, such as the size you'd use for trout. Even trout streamers are productive. Farmpond bass don't seem to be as shy with these types of lures, and you don't have to worry about spooking them when the lure hits the water.



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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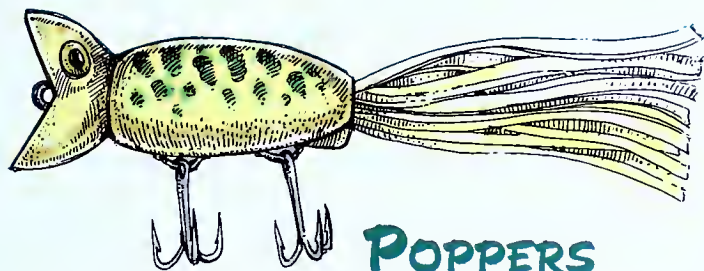
Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

Topwater Lures

Here is a look at some common topwater lures. The sound and disturbance these lures make trigger predators to strike. Color, lure size and shape are secondary keys. Often the

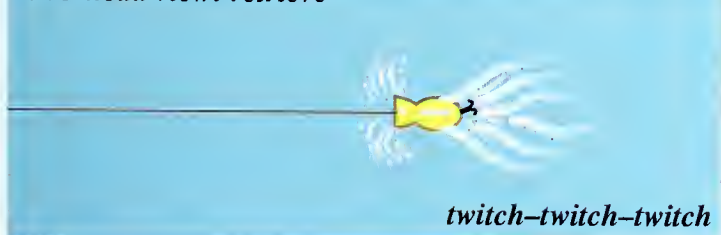
best topwater baits look like forage fish. But crazy colors and unusual sizes also take fish. These lures don't just imitate fish. Frogs, insects and other animals are regularly eaten off the surface by predators. Who knows why fish take topwater baits—who cares? Fished at the right time and place they can be deadly—and lots of fun.



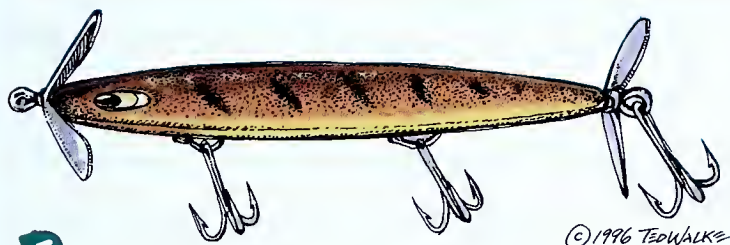
POPPERS

Also called chuggers. These lures have a cupped face and are twitched through the water on the retrieve. The cup makes a popping sound and splashes water on the surface each time it is twitched. This may fool fish into thinking the lure is a floundering baitfish or the sound of other predators busting on schools of baitfish.

Overhead view: retrieve



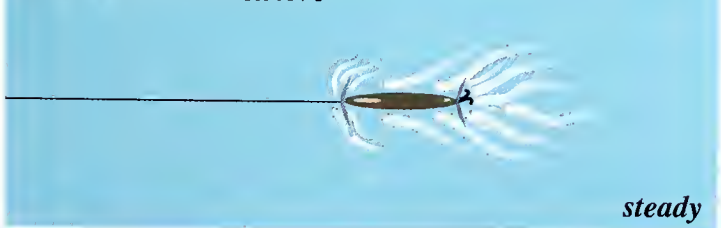
twitch—twitch—twitch



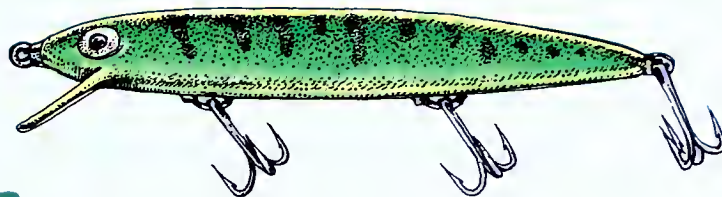
PROP BAIT

These baits have small propellers at both ends or at either end. As the lure is retrieved, these propellers rotate, making noise and splashing water. Like the popper, these lures simulate the sound of schooling baitfish on the surface. Prop baits are often fished with a steady retrieve, but they are also effective when twitched.

Overhead view: retrieve



steady



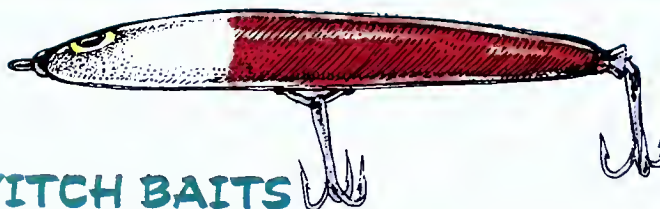
STICK BAIT

These long, minnow-shaped lures aren't really topwater lures. Often we fish them with a fast retrieve and they dive several feet. But if they are fished slowly, they stay on top. Because they are subtle and have a nice tight wiggle, this bait is effective when fish aren't aggressive. They are usually twitched, but can be deadly on a slow retrieve above or next to weed beds. Match the lure size and color to the available forage fish.

Overhead view: retrieve



steady



TWITCH BAIT

These offerings are more subtle than the other topwater lures. They look just like stick baits, but don't have a lip to make them wiggle or dive. These lures are made of hard plastic or soft plastic. Soft-plastic stick baits are rigged like rubber worms and have more action than hard-plastic ones. They are nearly always fished with a steady twitch. Bass anglers call this "walking the dog."

*Overhead view:
retrieve*



twitch—twitch—twitch

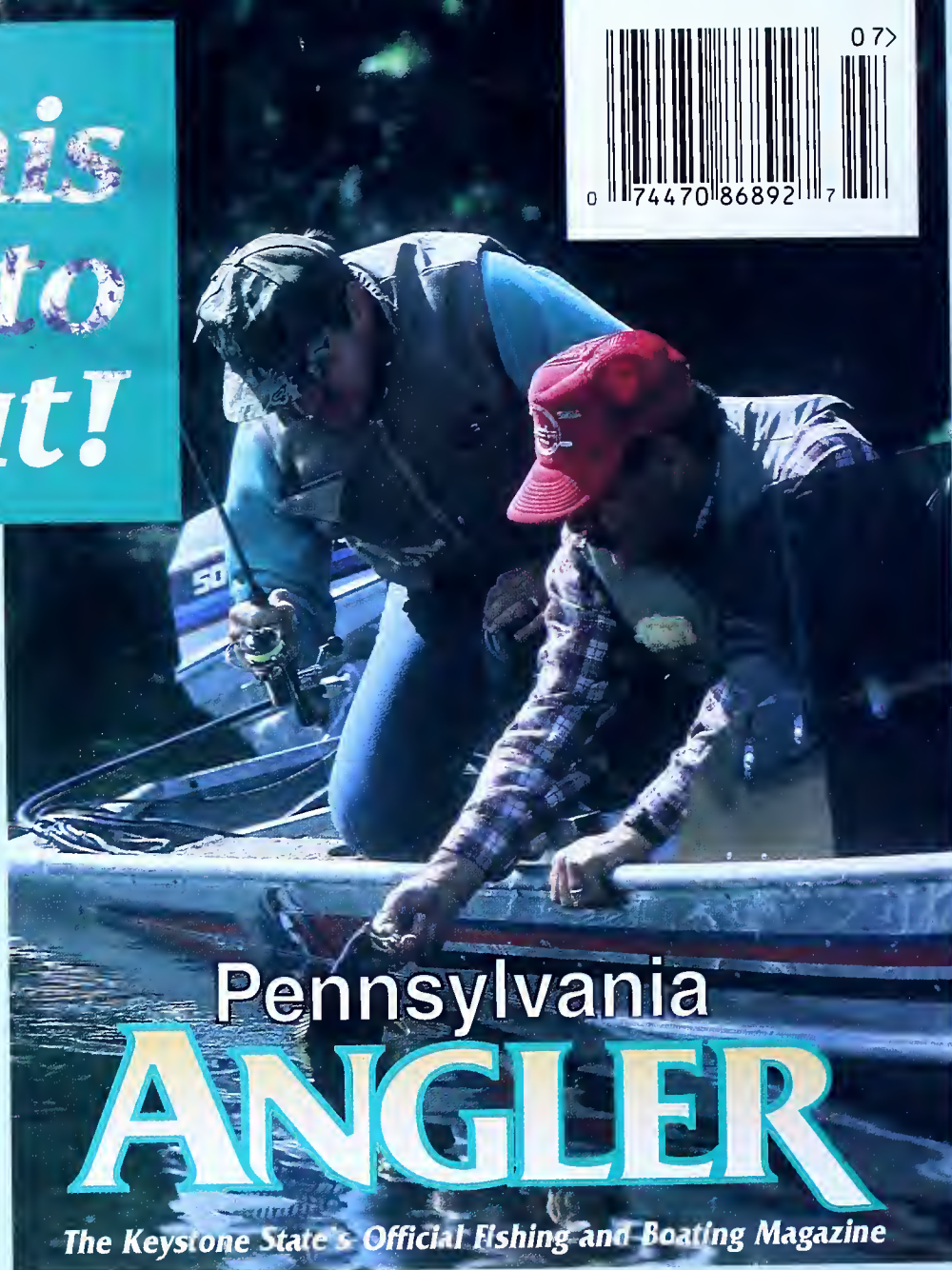
Topwater Tips

Longer rods (6 to 7 feet) help keep line off the water and reduce slack line. You will find you get more hook-ups when there is no slack line. You'll also have more hookups when you delay setting the hook. If you react too soon, you can pull the lure out of the fish's mouth.

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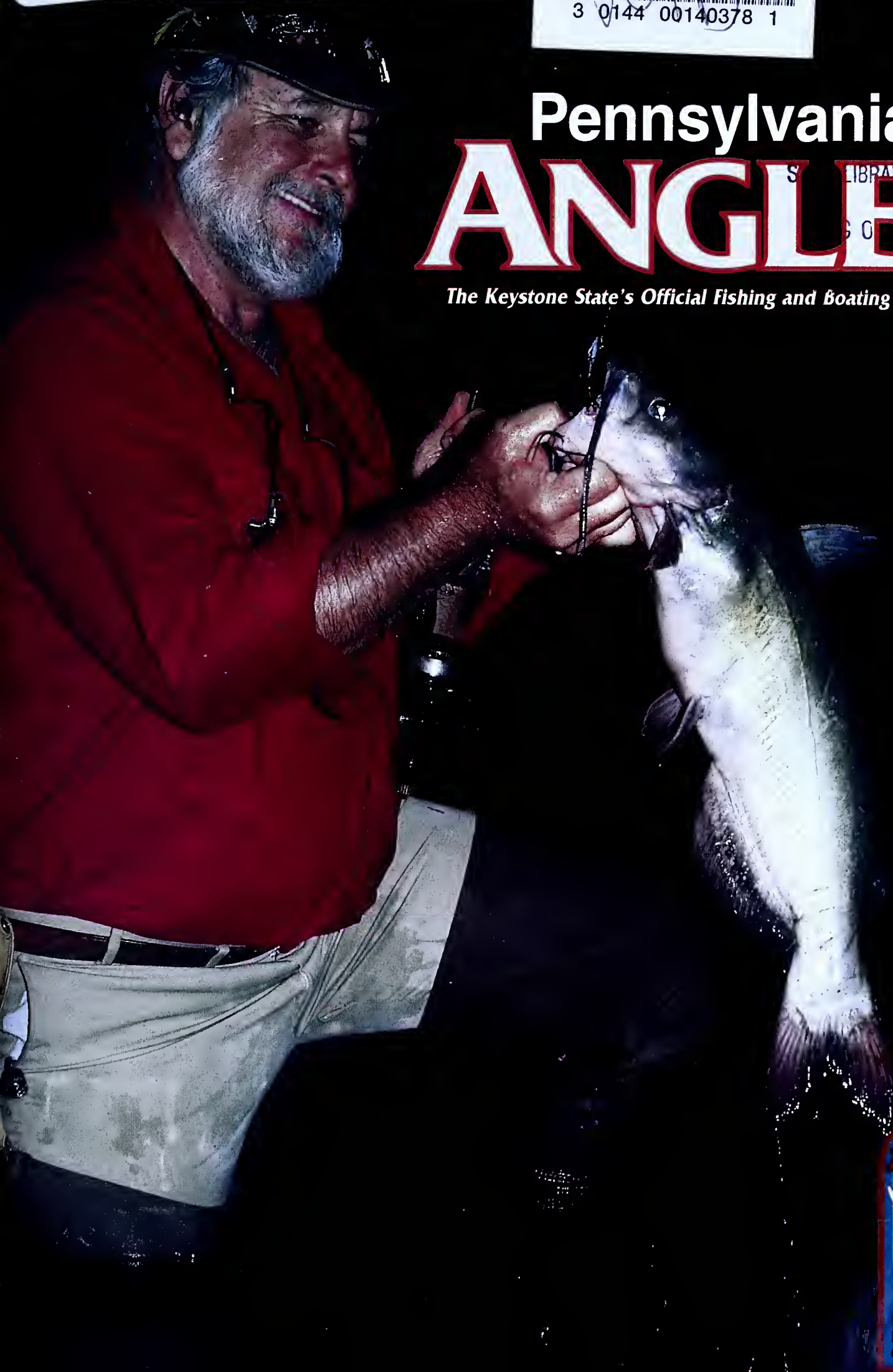
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The Keystone State's Official Fishing and Boating Magazine



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Straight Talk

Watch This Space!

This is the 170th column in this space with the title "Straight Talk." It is the last!

Starting in 1968, then Executive Director Bob Bielo took over the inside front cover of *Pennsylvania Angler* magazine for a monthly message. At first, the column had no title of its own; each column had its own title. Director Bielo then changed the name of this page to "Conservation Viewpoint," and he used that name until he left the Commission to become Executive Director of the Susquehanna River Basin Commission. When Ralph Abele succeeded Bob Bielo as Executive Director in 1972, the column was again published without a regular title. In July 1982, as part of a major facelift of *Pennsylvania Angler* Ralph assigned the name "Straight Talk" to this column and it has been used ever since.

Even though Ralph Abele didn't call this column "Straight Talk" for the first 10 1/2 years he wrote it, the name reflected his unique style. The name "Straight Talk" is linked strongly to Ralph in the minds of his many friends and coworkers. For many, the name Ralph Abele and "straight talk" go together in the same way that fishing and boating are linked in name of our agency. When the Ralph W. Abele Conservation Scholarship Fund published a book of Ralph's writings, they called it *The "Straight Talk" Years*.

This month the Fish and Boat Commission is observing what would have been Ralph Abele's 75th birthday. Elsewhere in this magazine, you'll see an article about Ralph and his many accomplishments. In addition, the Commission will be awarding the Ralph Abele Conservation Heritage Award later this month. As a further tribute to Ralph and his outstanding work, I have decided to retire the name "Straight Talk." Does this mean that the columns that Executive Directors Ed Miller, Larry Hoffman and I have produced have not been interesting and informative? Of course not. The retirement of the "Straight Talk" name simply recognizes that no one could ever duplicate Ralph's special style and perspectives. The name "Straight Talk" belongs to Ralph Abele, and I believe it is a fitting tribute to retire the name in his honor.

The upcoming change to this page is the first of many changes to *Pennsylvania Angler* that you'll be seeing in the upcoming months. The *Angler* is an outstanding publication with many devoted readers. In the next few months, we will be making changes to try to build on the magazine's strengths by adopting a new look and adding many special features. Our goal is simple: To provide more interesting articles, attract more readers and try to get the costs of producing the magazine more in line with its revenues.

The *Angler* will soon be sporting a new logo. There'll be more regular contributors, and the magazine will place a new emphasis on some of our most popular features, such as "Notes from the Streams." You'll be seeing many new and updated publications incorporated right into the magazine, including the Pennsylvania League of Angling Youth (PLAY) newsletter and the very popular "Inseason Trout Stocking Schedule" next spring. We're also looking at other possible changes to our flagship publication, including changes to the publication schedule and possible inclusion of limited advertising.

If you're reading this article, it means you're already a reader of *Pennsylvania Angler*. We need your help. First off, give us your ideas about changes to the magazine. The magazine will feature a "Mail" column, and we need to hear from you. Second, help us attract more readers. Give a gift subscription or encourage your fishing and boating friends to subscribe. Finally, watch this space and stick with us as we make the magazine even better.



Peter A. Colangelo
Executive Director
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Peter A. Colangelo

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Pennsylvania ANGLER

The Keystone State's Official Fishing Magazine

Lord of the Fish by Susan Q. Stranahan.....	4
White Perch: Our Next Gamefish? by John Swinton.....	7
Do Muskies Eat Other Gamefish? by Dave Miko.....	10
Maps Useful to Pennsylvania Anglers.....	12
PA Fish & Boat Commission Publications List.....	13
SMART Angler's Notebook by Carl Richardson.....	15
Bantam Boxers: Bluegills and Redbreast Sunfish by Vic Attardo.....	16
Making and Using the Spiralator by Chauncy K. Lively.....	21
Two Cats from Out East by Mike Bleech.....	23
On the Water with Robert L. Petri.....	27
PA's Top 36 Waterways for Larger Channel Catfish.....	31

This issue's front cover was photographed by Soc Clay.

New Bass Regs

Anglers on the Susquehanna River should remember that Big Bass regulations are now in place for most of the main river. Last fall the Commission moved to extend Big Bass provisions from Harrisburg upstream to Sunbury. Previously, only the area of the Susquehanna between the Holtwood Dam in Lancaster County and the Dock Street Dam at Harrisburg was managed under the Big Bass Program. The new area to be regulated as part of the Big Bass Program begins at the Dock Street Dam and extends upstream to the Fabri Dam at Sunbury. It also includes the portion of the Juniata River from the confluence with the Susquehanna to the Duncannon Bridge.

The regulation change was made after the 1996 *Summary of Fishing Regulations and Laws* went to print, so the extension is not listed in the booklet. For this reason, the Susquehanna Smallmouth Alliance produced and placed these signs to help the Commission protect, conserve and enhance the river portions under the new regulations.

Anglers are still bound by the new regulation. Big Bass Program waters include a 15-inch minimum size/four bass (combined species) daily creel limit during the open season. The 1996 season began June 15.

BIG BASS WATERS

SPECIAL REGULATIONS APPLY

This water has been designated a

"BIG BASS REGULATION"

water and the following
special regulations apply

LARGEMOUTH and SMALLMOUTH BASS:

- Minimum size is fifteen inches (15")
- Daily creel limit is four (4) - combined species

OTHER COMMONWEALTH INLAND FISHING REGULATIONS APPLY

Penalty for Violation as Provided by Low
Pennsylvania Fish and Boat Commission

Sign posted courtesy of: SUSQUEHANNA SMALLMOUTH ALLIANCE
(We encourage CATCH AND RELEASE fishing for all species)

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Lord of The Fish

by Susan Q. Stranahan



On April 18, 1982, The Philadelphia Inquirer published the following profile of Ralph Abele in its Sunday Magazine. As part of its tribute to Ralph during the month of what would have been his 75th birthday, the Commission is reprinting extracts from this article.

If Ralph were alive today, he would take great pleasure in knowing of the success of efforts to restore American shad and other migratory fish to the Susquehanna River Basin. Philadelphia Electric has gone from being "the principal opponent of shad restoration" as it was described in the 1982 article to being one of its great supporters. The two fish lifts at Conowingo Dam in Maryland lifted more than 37,500 American shad last spring despite high water and difficult weather conditions. These fish were trucked upstream for stocking above the three other hydrodams on the lower Susquehanna. By next year, it is expected that new fish passage facilities will be in operation at Holtwood and Safe Harbor dams, thereby opening up even more of the Susquehanna to the passage of migratory fish. By the year 2000, we expect fish passage to be in place at York Haven Dam. Ralph's dream that the major hydropower dams on the lower Susquehanna provide fish passage for migratory fish will then have been realized.

Ralph Abele and his waterways patrolmen want polluters to know that if they poison any streams, they're going to pay.

Ralph Abele (whose last name, he tells new acquaintances, is pronounced "ah, bull"), has taken the fish commission, which used to be a sleepy little bureaucracy whose agents spent most of their time looking for fishermen with no licenses (or too many fish in their creels), and made it into the most militant and powerful agency still pushing to clean up Pennsylvania's streams.

The commission is still carrying out its traditional duties, which also include breeding fish. This spring it released over five million fish in preparation for the opening of trout season yesterday. But because of important changes in the law, and the new policies that Abele has established, the commission's 436 full-time employees have been doing much more to keep the waters of the commonwealth clean for aquatic life—and while they're at it, for everyone and everything

Bud Hardie's Recollections

Ralph and Bud knew each other since their school days in Pittsburgh. Bud came to the Commission shortly after Ralph became Executive Director and worked in the E&I office before becoming Legislative Liaison.

"Ralph probably knew more about trees and woods than anyone else I've ever met. You could get a college education's worth of botany lessons just from a simple walk in the woods with Ralph. He was a brilliant man. He could tell every tree by its bark. He even knew them all by their profiles.

"Ralph was a brilliant student, and you hate to say it, a born leader. From the time he was young he was always a leader. No matter what he got into, somehow he just always rose to the top."

else in the state. Last year, the commission's enforcement officers investigated 424 pollution cases, prosecuting 187 of them and settling 101 others. Those statistics have climbed steadily since Abele took over a decade ago.

There's a rationale behind the emphasis on halting pollution. After all, Abele says what's the point in raising all those fish if they can't survive when you put them in the water? In fact, Abele thinks it's more important to make the state's waterways clean enough for fish to live naturally than it is to stock the streams with hatchery-raised fish—a position that endears him to many conservation-minded fishermen, but has also put him on a collision course with many politicians and industrialists.

Abele is in many ways an unlikely savior of the state's gamefish. When he went to the University of Pittsburgh he planned to become a petroleum engineer. Today he's a political conservative who, on most issues other than the environment, would be on the side of the businessmen his commission is prosecuting. What's more, Abele himself is not much of a fisherman. "I don't bet you he has wet his line in a stream for more than an hour when I've been with him," one close friend says. "You look up and he's off roaming around in the woods looking at mushrooms."

"Ralph is an intensely impatient person," a longtime friend says. "I guess he just finds fishing dull."

Fishing, perhaps, but not the job of fish commission director. The commission just happens to provide the perfect vehicle for Abele, which is not all that surprising when you learn that Abele helped create the legislation that gives the commission its current wide-ranging powers, and for someone who is working in government, he has an aversion to compromise—or even diplomacy.

Ralph Abele is 60, trim with a thinning fringe of white hair. His very British mustache gives him the appearance of a devilish gentleman, which he is. Friends say Abele's every emotion is written on his face. A meticulous dresser—favoring tweeds and tartans—Abele is known to quietly despair about a colleague's scuffed shoes or untrimmed hair. But there are aspects of him that are not disclosed by his appearance.

Abele was brought up in Pittsburgh (although he was born on a farm), and he is an enthusiastic bird watcher. (His conversation while driving will often be punctuated with sudden announcements

such as "a red-tail, *Bufo jamaicensis*," and he'll point to a distant hawk while his car seems on the verge of careening into a gully.)

Abele says his environmental philosophy was shaped by reading Aldo Leopold's conservation classic, *Sand County Almanac*, and by the outdoor adventure books of Daniel Carter Beard, a national commissioner of the Boy Scouts. From Scouting, Abele branched out into volunteer work with a number of conservation groups in western Pennsylvania, and for a time even served as a volunteer deputy warden for the fish commission in Allegheny County.

For that, Abele worked as an executive of a Pittsburgh food brokerage firm until 1969. At that point he resigned, resolving to get a job that involved conservation. He went to Harrisburg and became executive secretary of the Joint Conservation Committee, created by the General Assembly to oversee environmental legislation and programs in the state.

"He didn't understand the [legislative] process but he understood people," said Larry Schweiger, who worked with him there. As a result, Abele proved a master at getting what he wanted from the legislature. His basic tactic was to compromise on items he didn't think were important, to get those provisions he saw as vital. Peter S. Duncan, now secretary of environmental resources and a protégé of Abele's, put it this way: "Ralph knew how to give the opposition the sleeves out of his vest."

While working to obtain passage of legislation creating the DER in 1970 and 1971, for instance, he was able to reassure skeptical legislators a direct role in the policy-making of the new department, placing them on the Environmental Quality Board, which acts on all regulations proposed by the DER. At the same time he was able to accomplish his principal goal, which was to get citizen representatives on that same board.

When he was appointed executive director of the fish commission in 1972, he set out to use the lessons he'd learned in creating the DER legislation, so that what seemed to be a codification of fish-related laws dating back to 1866 actually transformed the little agency from one that managed the fisherman to one that managed a natural resource.

Abele carefully explained to his employees (almost all of whom he knows by name) his new vision for the commission. That vision was drawn from his

Pete Duncan's Recollections

Pete's relationship with Ralph began in 1970 when he worked for Abele, who at the time was Executive Secretary of the Joint Legislative Conservation Committee. They became trusted colleagues. Pete eventually succeeded Ralph at the Joint Conservation Committee when Ralph became Executive Director of the Fish Commission. Their work together continued as Duncan worked at the Department of Environmental Resources, where he was agency Secretary from 1981-1983, and at the Pennsylvania Game Commission, where Duncan was Executive Director 1983-1994. Both resided in Millerstown, and their working relationship quickly became friendship. Abele and his wife Peggy were god-parents to Duncan's children.

"Some of the most exciting times I ever spent working in state government came when I was working with Ralph. You would come home at the end the day completely limp, fatigued both mentally and physically when you were around Ralph. But you always had a smile on your face because you knew you were doing great things."

conservation ethic that fish and the water they live in are but one part of the ecosystem; to manage and preserve that part is to significantly improve the whole. Abele encouraged his staff, some of whom were initially skeptical, to take an active role in the transformation process.

Under the fish code, a criminal charge can be brought against a polluter without first establishing intent. DER's enforcement powers, on the other hand, flow from state criminal statutes that require proof of intent. "It sounds mean," says Abele, who knew exactly what he was doing when that wording was slipped into the code, "but when Conrail spills something into our waters, they'll pay for it. DER pays a lot of attention to intent. How do you prove intent?"



Leonard Green's Recollections

Leonard "Lenny" Green is one of Ralph Abele's oldest friends. A charter member of the so-called OB's, Lenny has been leader of conservation in Pennsylvania as a member of the Fish and Boat Commission, the Citizens Advisory Council, the Environmental Quality Board, the board of the National Wildlife Foundation and other organizations. Lenny currently serves as chairman of the board of the Ralph W. Abele Conservation Scholarship Fund.

"In 1964 Ralph W. Abele was living and working in Pittsburgh and I was living and working in Butler. One day he called and asked if I would meet with him and some Boy Scout officials. Ralph was on the Board and Chairman of the Conservation Committee for Exploring of the Allegheny Trails Council of Boy Scouts of America. It turned out that Ralph had organized an Explorer Post dedicated to exposing young men to the many fields of conservation careers. He wanted me to form a similar post in Butler County, so that we could organize joint field trips, making it worthwhile for the professionals who were meeting with us on weekends and volunteering their time.

I was already involved in youth work, so it was easy to see how my work with youth conservation camps and the explorer post would complement each other. It was through the summer conservation camps that I first met Ralph. He volunteered to teach classes every year at our camps and provided the leadership and encouragement that resulted in organizing 20 similar camps statewide.

"Ralph knows exactly what he's doing all the time" says DER's Duncan. "He'll issue a broadside calling us that big monstrosity that's so hard to get to move. He'll send us a vicious letter, full of venom. He knows exactly the kind of reaction that letter will produce, knows it will go all through the bureaucracy and create all sorts of trouble and in the end, will get exactly what he wants. Ralph says constantly, 'I'll be your conscience,' and he is.

Abele belongs to an informal club of eight men that meets several times a year,

often at the venerable Spruce Creek Rod and Gun Club in Huntingdon County, which owns what is considered one of the best stretches of trout stream in the state. The group calls itself the "Old Bastards," though Ken Sink, former national president of Trout Unlimited, the trout fisherman's fraternity, prefers that the group be referred to as just "the OB's please."

Since its founding in the early 1970s it has included among its members Maurice Goddard, retired head of DER, and the late John F. Laudadio, a state representative from Westmoreland County. These men, along with Abele, are considered by many to be the fathers of the state's environmental programs. "The group was formed because sometimes the structured conservation organizations were at each other's throats and weren't that effective," Abele says. "We could write a law and ram it through the General Assembly. Your soul would not want to let a group like that down. What days, what days."

Abele has one more great cause that he would like to see accomplished before he retires in about five years. It's a bit of unfinished business that has been hanging around the commission for over a century—restoration of the American shad to the Susquehanna.

Pennsylvania waters, including the Susquehanna, have historically been filled with shad—a fish that once sustained a profitable fishing industry here. Pollution, over-fishing and construction of dams blocking the shad's migratory trek from saltwater up the rivers to its freshwater spawning grounds resulted in the decimation of the species in the last century.

Now, pollution control and other programs have made it possible to bring the shad back to the Delaware and Schuylkill (In Philadelphia, a \$550,000 fish ladder was built around Fairmount Dam in 1979). Abele is sure that shad could now come back to the Susquehanna if there were fish passageways around the four hydroelectric dams on the river.

The commission, DER, the state of Maryland, the Susquehanna River Basin Commission, the Pennsylvania Federation of Sportsmen's Clubs and the U.S. Fish and Wildlife Service have filed suit to force the Federal Energy Regulatory Commission (FERC) to order the passageways built as a condition for fanning the federal licenses for the dams.

The principal opponent of the passageways has been Philadelphia Electric Co., which is co-owner of the Conowingo Dam, the tallest obstruction and the first one the

shad would have to cross on the way to their spawning ground. It argues that it has no business making its customers pay higher bills (even if it is only about \$3 a year per customer as has been estimated) so that shad can go upstream and spawn.

Abele, for one, is not impressed with the counter arguments. "We are restoring a lost resource that belongs to the commonwealth," he says. "It's a mitigation that the utilities must restore without any more than a reasonable consideration for cost. Dammit, we were mandated in 1866 to do it—we're just a little slow getting around to it."

ANGLER

Susan Q. Stranahan is a staff reporter for The Philadelphia Inquirer and the author of the book Susquehanna, River of Dreams.

Del Graff's Recollections

Del Graff is the Director of the Commission's Bureau of Fisheries. He worked closely with Ralph on numerous projects.

"Things that Ralph Abele said or did that inspired or left their mark on us fortunate enough to work with him would fill volumes, but two of my favorite pieces of wisdom from Ralph, advice I try to follow, were:

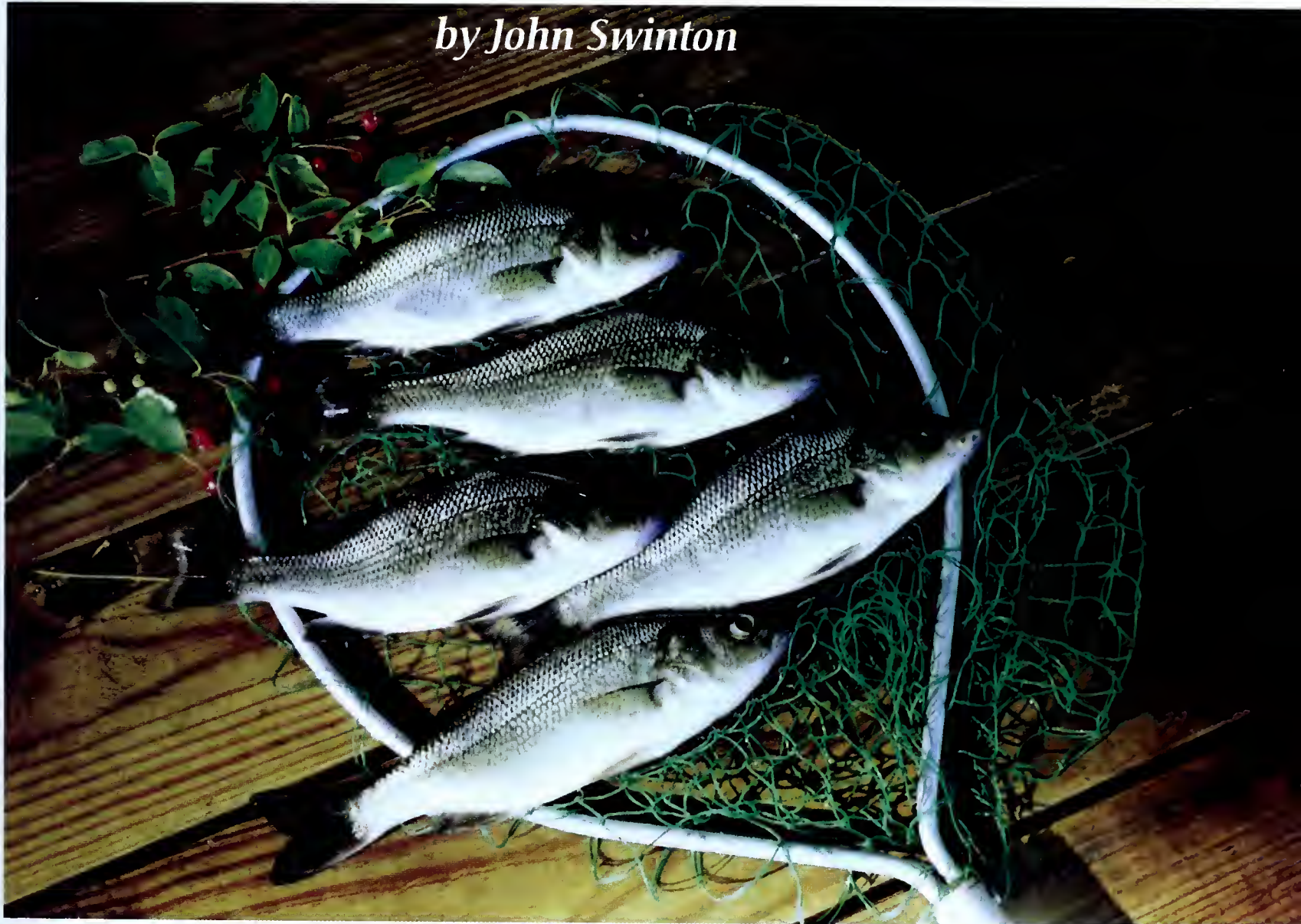
One, when we were dealing with a particularly contentious issue involving Fisheries, Enforcement and Environmental Services staff in a tough public/political situation, Ralph told us, 'Be courteous, be diplomatic, be conciliatory and be honest. If none of the rest works, then just be honest!'

"Another of my favorites from Ralph had to do with dealing with requests from the public and from elected officials. Ralph said, 'Do the right thing, but never ever do anything for someone you like that you're not prepared to do for someone you don't like.'"



WHITE PERCH: OUR NEXT GAMEFISH?

by John Swinton



Crappie fishing on western New York's Chautauqua Lake one recent May morning with Dave Peterson, I set the hook on what I assumed would be another slabside for the cooler. But crappies offer only routine resistance, and this fellow zipped off at sharp angles and bulldogged strongly.

"Smallmouth," I guessed aloud. Unlike a smallmouth bass, however, my fish shunned the surface. It came to our net a silvery 13-incher—a nice match in size for our crappies, but as I said, much stronger on the line.

"Darn," Dave muttered, eyeing my catch with contempt. Peterson lives on

Chautauqua in Ashville, New York, and specializes in crappies. He clearly resented the new arrival. "These things are taking over."

As someone who fishes throughout the Northeast, I'd met the fish before—in Lake Erie, the St. Lawrence, Connecticut and Delaware rivers, the Chesapeake Bay, and the cool lakes of Maine. It was a white perch. Peterson offered to toss it back.

"Keep it," I countered. "They're great eating. Add it to the crappies." Regarding me with a frown, Dave tossed it in the box.

"I know exactly how your friend felt," laughed Mike Kaufmann, Commission Area 6 Fisheries Manager. Mike has more white perch experience than most other Pennsylvanians. "It's a sporty fish, I'll grant you, but it's also troublesome. Let me tell you about Lake Nockamixon."

The Commission discovered white perch in Nockamixon in 1982, and by 1985 they had become so abundant that, according to Mike, "they had eaten themselves out of house and home. We assumed the population would soon crash, which is just what happened under the ice that very winter."

But as they usually do, the white perch rebounded in Nockamixon to achieve an uneasy co-existence with the other species. Meanwhile, they showed up in Galena (locally known as Peace Valley) Lake, Lake Luxembourg, and tiny Levittown Lake. Mike guesses they're also present in the large, private Van Sciver Lake.

To the south and west, white perch have established themselves in lakes Marburg and Redman near York, and Lake Ontelaunee, Reading's reservoir. Schools of 11-inchers there promise a new state record.

"We also find incredible numbers of white perch in the tidal Delaware," Mike observed. "But those numbers drop dramatically as you go upstream." I mentioned taking a white perch on a shad dart once near Easton, which squared with Mike's surveys.

Commission Fisheries Biologist Roger Kenyon, based along Lake Erie, also knows white perch. "I caught them in Lake Ontario 40 years ago as a kid. Our first Lake Erie record occurred in 1951. They remained scarce there until the mid-1980s when they exploded to numbers exceeding even yellow perch."

Then, as Roger recalled, those numbers fell off to reach an accommodation with other fish—just as Mike Kaufmann described for Lake Nockamixon. But now, as yellow perch numbers dwindle, Erie restaurateurs sell "lake perch" rather than yellow perch sandwiches, substituting the more abundant white perch.

"It's pretty good," Roger Kenyon shifted from biologist to culinarian. "Yellow perch has a nutty flavor. White perch is fishier. I can tell the difference, especially if I take the sandwich apart and examine the fillets. But most people like white perch just as much."

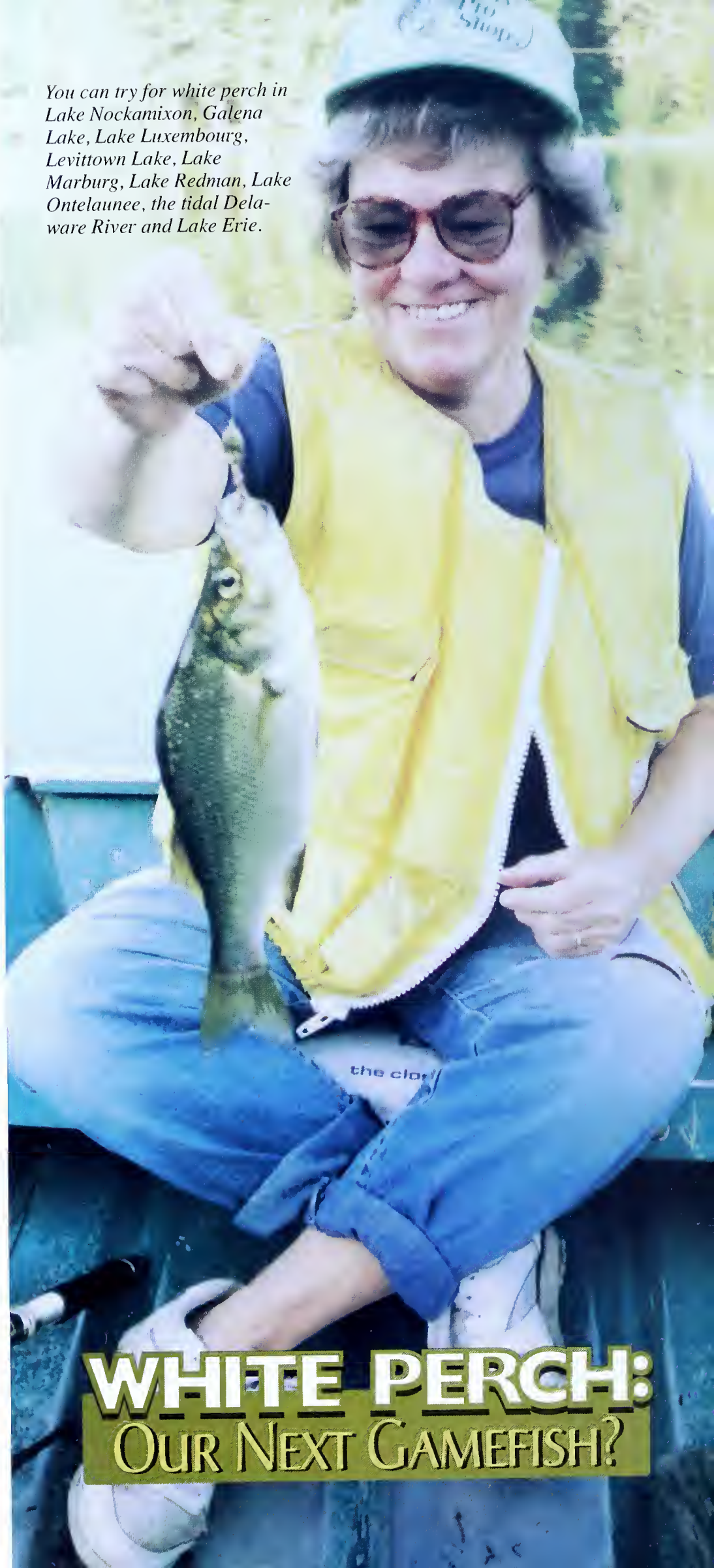
Farther south in western Pennsylvania, Area 2 Fisheries Manager Ron Lee and Area 1 Fisheries Manager Craig Billingsley report no sign yet of white perch in the big lakes like Pymatuning and Conneaut, and Pittsburgh District Army Corps biologist Bob Hoskins has found none behind Kinzua Dam.

"It's fortunate," Craig Billingsley remarked. "I agree they're a sporting and good eating fish, but they're just too prolific, and they compete with existing species. I don't want to find them. But just between us, it's probably inevitable."

Craig's worries are justified. In New England, white perch have reduced trout and bass populations, and they can indeed take over. On the plus side, though, they fight hard and are delicious. The late master

You can try for white perch in Lake Nockamixon, Galena Lake, Lake Luxembourg, Levittown Lake, Lake Marburg, Lake Redman, Lake Ontelaunee, the tidal Delaware River and Lake Erie.

photo-John Swinton



**WHITE PERCH:
OUR NEXT GAMEFISH?**

angler and gourmet A. J. McClane called white perch New England's finest food fish, and our own vacations there always feature white perch in the skillet and chowder pot.

The case against white perch, apart from their tendency to overpopulate, rests mainly on the impression that they're just another small panfish. The white "perch" is, however, a true bass, a close cousin of the white bass and striped bass, with which it shares habits and habitat. Even though it's the smallest of the three, it grows quite large and provides a sporting test for the light-tackle angler. The current world record is a 20-inch, 4 3/4-pounder taken back in 1949 from Maine's Messalonskee Lake. But this is one world record ripe for an eclipse.

For all their abundance, however, white perch behave mysteriously. As ichthyologist Edwin L. Cooper, who wrote the authoritative *Fishes of Pennsylvania*, told me, "We know surprisingly little about *Morone americana*. It's a difficult fish to study in the wild." For example, their large schools appear noisily on the surface, and then seem to vanish. I've had them cough up fresh rainbow smelt on a pond that contains no rainbow smelt. But a deep connecting lake does. In other words, perch feeding at 60 or 70 feet spontaneously rose up and swarmed across a sand bar into shallow water—an amazingly quick adjustment to major depth, diet, location and temperature changes.

More adaptability

White perch demonstrate still more adaptability. In the spring, they spawn on the fly, so to speak, a female spreading thousands of eggs as she moves, escort males adding their milt, and the unattended eggs hatching into fry within four days. They also enjoy long lives: One 14-inch specimen had lived 20 summers. They rove constantly in search of such diverse food as insects and their larvae, minnows, leeches and crayfish. Moreover, they feel equally at home in salt, brackish and fresh water.

Such resilience means you can harvest white perch unconcerned about overfishing. But you have to find them first. I've used a fishfinder to spot the schools. It's more fun, however, to troll slowly and double back when you catch one, or to sneak up on a surfacing school and cast to its edges.

Like lots of better-known sport fish, white perch take wet and dry flies and

nymphs, spinner-fly combinations like the Roostertail and Joe's Fly, small plugs, and even plastic grubs and skirted tube lures. Like panfish, they gobble up worms and small minnows. My own favorite approach is a compromise: A small single-hook spinner with a piece of earthworm covering just the point and bend.

My wife, Cordy, and I fish white perch as a team. I guide the motor, position our boat, bait her hook, and net her fish. Cordy's happy task is to lay her casts along a perch school and then hook and play them one after another. She does her job expertly on ultralight tackle that includes a five-foot spinning rod and a reel with 4-pound line.

Here in Pennsylvania, white perch could sustain the kind of specialized sport fishery now centered on crappies, and they already attract some attention. Kevin Strunk of Bangor holds the current state record, a comparatively small fish (no offense, Kevin) of 1 pound, 7 ounces taken in 1991 from Minsi Lake in Northampton County. But I suspect bigger white perch get mistaken for white bass or small stripers.

Strunk's record suggests that the fish is poised to inhabit our larger lakes. It seems certain to reach Lake Wallenpaupack. I predict, as well, it will negotiate the lower Susquehanna dams (it's been taken off Three Mile Island), and establish itself in the Allegheny Reservoir, in Lake Raystown, and in the larger western lakes near Chautauqua.

Easily trapped, the juvenile fish make ideal bait and hitch a lot of rides in buckets and live wells. But remember Pennsylvania's prohibition against spreading alien fish, and consider Mike Kaufmann's expert appraisal: "The white perch competes aggressively with established populations, and I'm not interested in seeing it take over any more water."

Besides, these tough, resourceful fish don't need a lift. They can travel great distances on their own—for example, up the St. Lawrence, through the Welland Canal, and on into the Great Lakes.

Vacationing last August on a western Maine pond, we arrived in the midst of the hot, dry spell that parched most of the East. We had promised pending guests from Bucks County an authentic Down East supper, but no surface activity betrayed the presence of white perch. It looked as though we might have to boil lobsters or bake some salt pork and soldier beans.

Then, at 5:30 on the misty morning of August 6, with a gray sun rising behind the red pines, the surface of our pond erupted in white perch, flopping all around us in a feeding frenzy.

The 30 perch we kept that morning averaged a foot, and several reached 14 inches. To a fish, they slammed Cordy's spinner and fought hard in their angular runs. (Like stripers and white bass, white perch rarely leap, though sometimes they surge partly out of the water.)

My wife boated several dozen of these magnificent fish before she rested her forearm and urged me to take a turn. Hoping to fool the predatory smallmouth that often follow white perch schools, I threw a sinking crankbait in a yellow-perch pattern and instantly felt a jolt. The fish lunged powerfully enough to test my drag, thrashed at boatside, and then entered our net, a 15-inch white perch slightly over two pounds.

Freshly caught like this, a white perch rewards a close look. It's a sleek, silver fish with a single thin stripe down its lateral line. In larger fish, the silvery scales flash with gold highlights, and two iridescent lavender patches decorate either side of the lower mandible. A more respectful and biologically correct name would be "silver bass." Finally, a mature white perch carries a high forehead, which accounts for its odd nickname, "humpy."

Whatever authentic Maine supper our Carversville friends, Chris and Steve Falk, expected, when they pulled into camp the evening of August 6, we sat them down to a platter of white perch fillets dusted in seasoned flour and pan-fried in olive oil. Exclaimed Steve between mouthfuls, "Swinton, this fish is terrific. Where'd you buy it?"



A Unique Flavor

The old argument over the best tasting fish usually pits freshwater walleyes and crappies against saltwater flounder or striped bass. Meanwhile, landlocked white perch retain a hint of their salty origin. So those who like a dash of the oceanic in their blander freshwater fish will welcome the flavor of white perch, an ideal blend of the two preferences.—JS.

DO MUSKIES Eat Other Gamefish?

by Dave Miko



Commission biologists use a device called a "gastroscope" (right) to identify the stomach contents of muskies without harming the fish. This study revealed vital information on how much muskies actually eat.



They are fierce predators of great digestive ability capable of eating twice their weight in food each day. They have reportedly "plucked" ducks from the surface of lakes and occasionally attack unsuspecting swimmers. These are just some of the descriptions and rumors that surround the toothy predators known by biologists as Esocids and by anglers as muskellunge and tiger muskellunge. Largemouth bass have their own history of aggressiveness, no doubt a result of television fishing shows. Who hasn't been channel-surfing Saturday morning television and stumbled across a gentleman in his early 40s wearing a ball cap and fishing out of a sparkling, overpowered bass boat, hooting and hollering about a hawg largemouth that just engulfed his crankbait.

Reports, stories and programs like these help to form angler opinions regarding the aggressiveness of these fish and other predator fish in Pennsylvania lakes. Eventually, anglers, story tellers that they are, use these stereotypes to their advantage by creating the perfect excuse for a bad day of fishing. The excuse goes something like this: "The muskies and largemouth bass in the lake are eating all the trout the Commission stocks, and there aren't enough left for anglers to catch."

Angler concerns regarding predator fish management in Pennsylvania waters are routinely voiced. However, the greatest concern seems to be on the management of muskellunge and tiger muskellunge in waters stocked with catchable trout. The Fish and Boat Commission, thinking that these concerns were worthy of a closer look, designed a study to determine the extent not only that muskellunge and tiger muskellunge predation has on stocked trout, but also if walleyes and largemouth bass are eating stocked trout. The study was carried out by the Area 8 Fisheries Management office in Somerset.

The study consisted of collecting tiger muskellunge, largemouth bass and walleyes large enough to eat a stocked trout and determining the percentage of these fish that actually had trout in their stomachs. Then, by applying known feeding rates and estimated predator population sizes in the study waters, Commission biologists could determine how many trout each species of fish could actually have eaten.

The predators were collected for two days immediately following pre-season trout stocking and one day immediately following an in-season trout stocking on two lakes (North Park Lake in Allegheny

County and Keystone Lake, Westmoreland County) in southwest Pennsylvania.

Collecting the fish immediately following trout stocking allowed the greatest chance for a trout to be eaten by a large predator. Using a tool called a "gastroscope," the biologists were able to identify the stomach contents of the fish without harming the fish.

From the study it was determined that largemouth bass and walleyes needed to be 15 inches long and tiger muskies, 16 inches long before they could eat the typical catchable-size trout, which in recent years has averaged over 10 inches. Because there are relatively few large predators in any fish population, predation on stocked trout was expected to be low.

Through angler interviews and counts on trout stocked lakes, the Commission determined that it takes anglers about 19 days to harvest most of the trout from lakes of similar size to North Park Lake (75 acres) and Keystone Lake (78 acres). Through fish population and abundance studies on North Park and Keystone lakes, the Commission has a good "picture" of the sizes and numbers of predator fish in these lakes. Then by applying the known digestive and feeding rates of the predator populations, Commission biologists were able to determine the number of trout that were lost to predation in each lake.

What they found may surprise you. Following a fish population survey of North Park Lake, Commission biologists determined that although a good largemouth bass population existed in North Park Lake, there were approximately only 50 largemouth bass large enough to eat a stocked trout present in the lake at any one time. It was estimated that only 1.4 trout/day, or 26 trout in 19 days, are eaten by largemouth bass in North Park Lake. This may seem low, but remember that unlike people, fish do not need to eat everyday, and when they do eat they do not actively look for stocked trout. They eat the first available source of food they encounter.

Only four walleyes large enough to eat a stocked trout were collected from North Park Lake during the study and all had empty stomachs. However, biologists think walleyes also prey on stocked trout, but like the largemouth bass and tiger muskellunge their numbers in a trout-stocked lake are not great enough and angler harvest is fast enough that they do not severely affect stocked trout numbers.

Keystone Lake has a dense largemouth bass population. However, the size structure of the largemouth bass population is

strongly tipped toward fish less than 15 inches, which are too small to eat stocked trout. Of the few largemouth bass collected at Keystone Lake large enough to eat a stocked trout, none was found to have trout in its stomach. For this reason Commission biologists think predation on stocked trout by largemouth bass in Keystone Lake is extremely low.

Approximately 250 tiger muskellunge are stocked in Keystone Lake by the Commission every three years in a management approach designed to provide a variety of fishing opportunities and the chance to catch a 30-pound-plus fish. Biologists estimate that the tiger muskellunge population is reduced by 50 percent annually by predation, harvest and natural causes. This means that in any given year there are approximately 69 tiger muskellunge large enough to eat a stocked trout in Keystone Lake. Even with their more aggressive feeding habits, these large predators could still be responsible only for the loss of one trout per day, or 19 trout before anglers harvested the majority of stocked trout.

Even if every tiger muskellunge capable of eating a trout did eat a trout, the result would have been a loss of 93 trout to tiger muskellunge predation in 19 days, or 1.4 percent of the stocked trout. Given that these percentages were based on the actual stocking of 6,500 trout in each lake, plenty of trout would remain to provide good fishing opportunities.

The Fish and Boat Commission attempts to provide fishing opportunities for anglers with a variety of interests. One way to do this is to manage a waterway with a variety of fish. With so many different angling preferences, this sometimes becomes a difficult and challenging balancing act. With the recent fishing license fee increase, angler concerns that their license money isn't spent to feed large predators with expensive stocked trout is certainly legitimate. The results of this study clearly show that this is not the case. The Pennsylvania angler is the most effective predator and benefits the greatest from the Commission's stocked trout program. The bad news is that anglers will need to come up with another good excuse for coming home empty-handed. But knowing anglers, and as an angler myself, creating a new excuse should prove to be a simple, if not an enjoyable, task.



Dave Miko is the Commission Area 8 Fisheries Technician.

Maps Useful to Pennsylvania Anglers

The Pennsylvania Fish and Boat Commission does not sell these maps. For ordering and other information, contact the company or agency directly.

County Maps

Type 3, or the larger multi-colored **Type 10 County General Highway Maps**, show all public roads including state, township and forest roads. Lakes, rivers and streams in the counties are also shown. Contact PA Department of Transportation, Publications Sales Store, P.O. Box 2028, Harrisburg, PA 17105. Telephone 717-787-6746.

Pennsylvania: County Maps and Recreational Guide provides a handy guide book for the traveler and sportsman. The easy-to-use reference guide contains maps of each county showing roads, parks and wilderness areas. Available from: County Maps, Puetz Place, Lyndon Station, WI 53944. Telephone 608-666-3331.

Five-color, full-topographic county and county region maps are also available from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

Topographic Maps

Topographic maps are published and sold by the U.S. Geological Survey. An **index** showing the topographic maps for each quadrant of the state is free. The index includes the area covered by each quadrangle map, its name, scale and year of survey. Addresses of local map dealers and federal map distribution centers are also provided. Contact: Map Distribution Center, U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225. Telephone 303-236-7477.

In Washington, D.C., over-the-counter sales (no mail orders) are available from: U.S. Geological Survey, Main Interior Building, 1849 NW "E" Street. Hours 8:00 a.m. to 4:00 p.m. Telephone 202-208-4047.

The Pennsylvania Atlas and Gazetteer is a comprehensive guide with topographic maps that list roads, mountains with elevation contours, forest areas, marshes, waterways, boat ramps and dams. Contact: DeLorme Mapping Co., P.O. Box 298, Freeport, ME 04032. Telephone 207-865-4171.

Waterproof **Rough Country Topos** are available for all field-use scale topographic quadrangle map areas in Pennsylvania. Raised relief maps and regional topographic maps can also be purchased from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

The U.S. Forest Service publishes a map of the **Allegheny National Forest**, detailing all the forest service roads, as well as the locations of the region's trout waters. The map costs \$3.00 plus tax. Contact: U.S. Forest Service, 222 Liberty Street, Warren, PA 16365, or call 814-723-5150.

Lake Structure (Hydrographic) Maps

These maps show "structure" (depths, bottom contours, dropoffs, etc.) and are available for several lakes.

International Map Co., 547 Shaler Boulevard, Ridgefield, NJ 07657. Telephone 201-943-6566 or 943-5550.

Northwoods Publications, Inc., 430 N. Front Street, Wormleysburg, PA 17043. Telephone 717-761-1400.

Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

River, Stream Maps

The Delaware River and Outdoor Recreation. Series of 10 maps of the Delaware River. Waterproof maps showing physical characteristics and recreational facilities of the river from Hancock, NY to Trenton, NJ. Contact: Delaware River Basin Commission, Box 7360, West Trenton, NJ 08628. Telephone 609-883-9500.



Delaware River north of Stroudsburg

Howard William Higbee's Stream Map of PA (includes a free location guide). Shows 45,000 miles of Pennsylvania waterways, including the locations of 900 trout streams and 300 lakes, dams, reservoirs and ponds. Identifies "Class A" limestone streams, bass waters and trophy fish waters. Contact: Vivid Publishing Co., 347 Rural Avenue, Williamsport, PA 17701. Telephone 717-322-1167.

Schuylkill River Users Guide. Series of eight waterproof maps. Identifies public access sites, stream flow characteristics and dams and pools, from Port Clinton to Fairmount Dam. Obtain from the State Book Store, 1825 Stanley Drive, Harrisburg, PA 17103. Telephone 717-787-5109.

Susquehanna Water Trails. Detailed canoeing map of the Susquehanna River through the Endless Mountains of northeast Pennsylvania. The map shows towns, highways, access areas, camping areas and major islands. Endless Mountains Tourist Bureau, RR 6, Box 132A, Tunkhannock, PA 18657-9232. Telephone 717-836-5431 or 1-800-769-8999.

Navigation/Nautical Charts

Allegheny, Monongahela and Ohio Rivers Navigation Charts are available for the Allegheny River (mile 0-72), Monongahela River (mile 0-128.7) and Ohio River (mile 0-127.2). Contact: U.S. Army Corps of Engineers, 1000 Liberty Avenue, Pittsburgh, PA 15222. Telephone 412-644-6872.

Nautical Charts of Lake Erie and the Delaware River are available from Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone 301-436-6990. Lake Erie charts are in Nautical Chart Catalog 4; Delaware River charts, Catalog 1.

ANGLER



Pennsylvania Fish & Boat Commission

PUBLICATIONS

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	Qty.	Price	Total
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Warmwater Fishes of Pennsylvania		\$.50 + .03*	\$
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Mail orders for above wall charts only. Add: \$2.00 (1-5 charts) \$3.00 (6 or more charts)			\$
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Pennsylvania Amphibians & Reptiles		\$10.00 + .60*	\$
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Guide to Public Fishing Waters and Boating Access		\$2.00 + .12*	\$
Identification Guide to Pennsylvania Fishes		\$2.00 + .12*	\$
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Sub-total			\$

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	I Just Bought a Boat
	Ice Fishing in Pennsylvania
	Lakes in Pennsylvania
	Limestone Streams

<i>Qty.</i>	<i>Title</i>
	Map Sources
	Marine Fire Extinguishers
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* PA residents include 6% sales tax.



PUBLICATIONS

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SMART

Angler's Notebook

by Carl Richardson
illustrated by Ted Walke

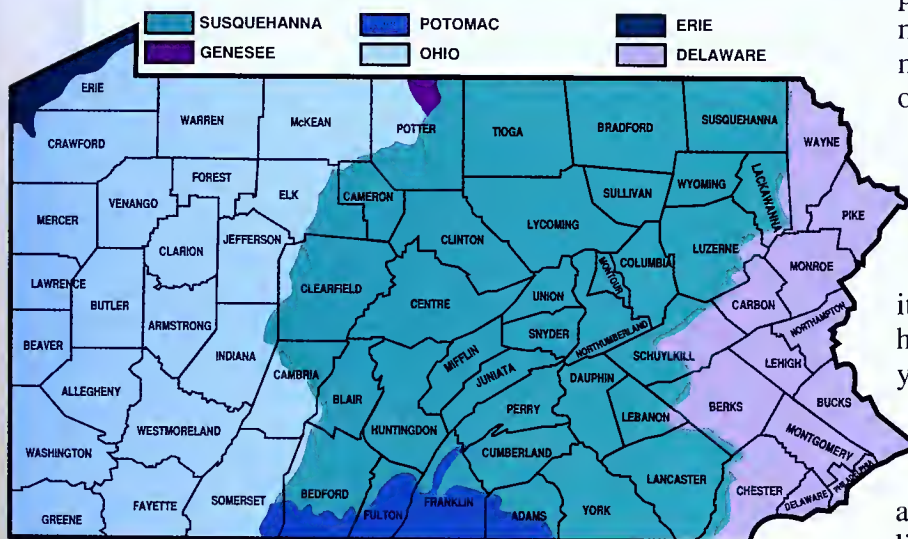
Species Profile: Channel Catfish

GENERAL INFORMATION

Scientists know the channel catfish by its Latin name *Ictalurus punctatus*, which means "spotted fish cat." This fish belongs to the Catfish family, known as Ictaluridae.

RANGE

In Pennsylvania channel catfish are found in all the major river basins, but they are more common in the Susquehanna and Delaware River basins.



IDENTIFICATION

The channel catfish has that typical catfish look: A wide, flat mouth with barbels, or whiskers, on the top and bottom, and spines on the dorsal fin and pectoral fins. However, the channel catfish has a deeply forked tail, unlike the bullheads, which have a rounded tail. Channel catfish also have a dark-gray or olive back with a light belly. Young or small channel catfish have dark spots. The barbels are dark. The white catfish also has a deeply forked tail, but it has light barbels.

HABITAT

They prefer moving water, so they are found in Pennsylvania's large rivers such as the Susquehanna, Juniata, Delaware and Lehigh. They need water temperatures warmer than 75 degrees to successfully reproduce. In these rivers they are often found at the end or head of riffles near deep-water cover. They also inhabit the brackish tidewater, found in the Delaware and Chesapeake bays. They can also be found in some lakes and reservoirs.

REPRODUCTION

Channel catfish mature at age 3. By that time they are about 8 to 11 inches long. Spawning begins as water temperatures warm above 75 degrees. These temperatures are necessary for the eggs to develop. The male selects and maintains the nesting site. Old stumps, culvert pipes, rock outcrops and even tires are used by spawning channel catfish.

The female enters the nest site and deposits a portion of her 2,000 to 70,000 eggs. The male fertilizes the eggs and begins his watch. The fertilized eggs are sticky, and a whole mass of eggs is about the size and shape of a pancake. The male remains at the nest site, defending it against other males and predators. After the eggs hatch, he also defends the fry. For part of their first summer, the young channel catfish are guarded by one of the parents.

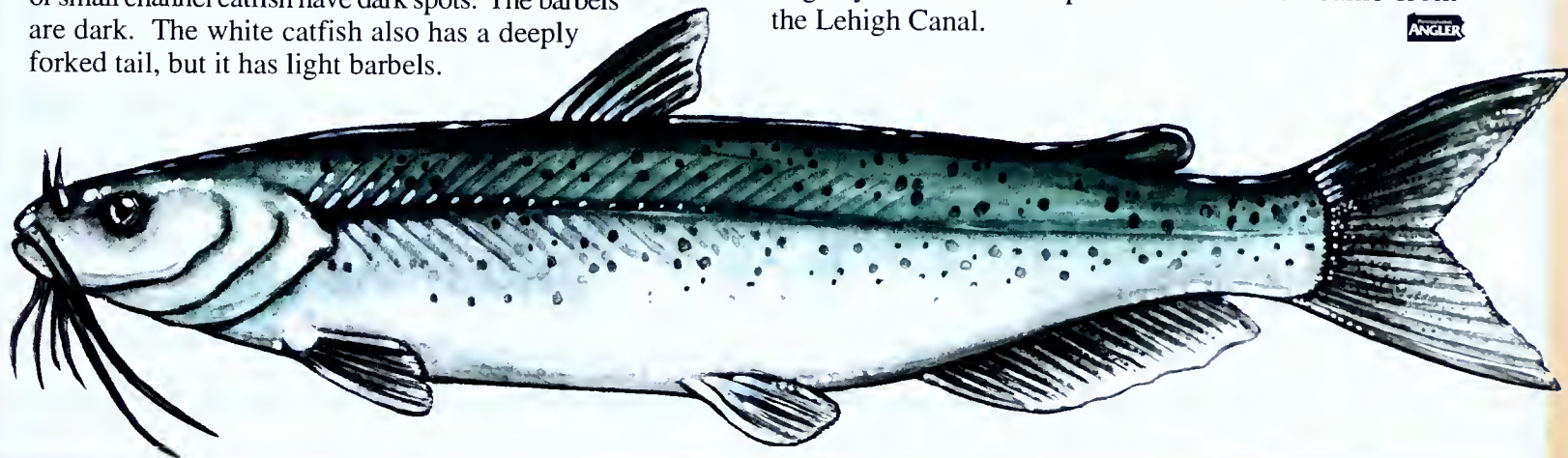
FOOD

Young catfish eat mostly aquatic insects like midges and caddis larvae. They also eat other aquatic invertebrates like crayfish. When they mature they prefer fish, although judging from some of the baits anglers use, they will eat anything. During the incredible hatches of white flies on the Susquehanna River in August, adult channel catfish eat the nymphs as they swim to the surface. Channel cats also rise to the surface and sip on the dead adult white flies.

SIZE

The current Pennsylvania state record catfish weighed slightly more than 35 pounds. That fish came from the Lehigh Canal.

ANGLER



BANTAM BOXERS:



**Bluegills
and
Redbreast
Sunfish**

by Vic Attardo

With light spinning tackle or a fly rod, bluegills and redbreast sunfish are powerful bantam-weight fighters and I am always happy to take one on. Though shaped the same and sharing the same physical characteristics, they are quite different—particularly when it comes to habitat.

Bluegills prefer a life spent in farm ponds and lakes. You can find them around some moderate flows, but their ideal abode is a quiet, stillwater home. Bluegills move back and forth from shallow to deep water depending on their mood, but they are primarily a fish that likes a low ceiling over its head. Redbreast, on the other hand, prefer a running stream or speedy river. Yet on the highway of life, redbreast swim in the right-hand lane, such as a bankside eddy or shallow pool, and leave the passing lane to other species, like trout and smallmouth.



Hybrid redbreast sunfish/green sunfish taken from the Delaware Canal.

What's my line?

It surprises me how many experienced anglers can't distinguish a bluegill from a redbreast, and I wish I had the proverbial penny for all the times I've heard fishermen misidentify a hefty, broad-sided redbreast as a bluegill.

When told it's not a 'gill but a horse of another color, most anglers respond by saying they never heard of a redbreast before. I have nothing but admiration for the colorful redbreast, so I like to give these fishermen a short lesson in sunfish identification.

At the same time, fishermen often call a bluegill, "some kind of sunfish." In Pennsylvania there are five members of the sunfish family of which the bluegill is only one. Other members of the group are the green sunfish, which frequently forms hybrids with other sunfish, the redear sunfish, and every kid's favorite, the pumpkinseed. In the southern states, redears are called shellcrackers.

In body style, redbreasts and bluegills closely resemble each other because both are stubby and dish-like. But the two species differ in color and other physical attributes. The bluegill is noted for its black earlobe, which is actually an extension of its gill cover. But it's the redbreast that has by far the longest gill flap of the two. The black earlobe of the redbreast is thin and flexible and narrower than the eye of the fish. It can extend nearly to the midpoint of the abdomen. On the bluegill, the gill flap is short and stubby and as wide or wider than the eye.

The difference in coloration between the two species is also distinctive. The bluegill has six to eight broad vertical bars on its side. These dark bars extend from the dorsal fin to the belly. The redbreast has no such vertical bars, but its face is streaked with wavy aqua-blue or green lines. Even though the throat of the bluegill is bright orange in summer, the colored belly of the redbreast is more expansive.

The color values of each fish can be altered according to habit. I have caught bluegills in tannin-rich Pocono ponds that are as black and coal.

If you are trying to determine whether you have caught a redbreast or a bluegill, look to the gill flap. It is the best way to distinguish the two species. But if you can't distinguish between the two, don't feel like you're a piscatorial dummy. Last year in a story on the Delaware River, a national fly fishing magazine mislabeled a photo of a redbreast as a bluegill. I waited for months for someone to write in and correct the editors, but no one did.

For years I've been telling my friends that I'm part of a two-man campaign to raise the status of the obscure redbreast. The other guy who has sleepless nights when anglers incorrectly identify the two fish is the Fish and Boat Commission's, Area 6 Fisheries Manager Mike Kaufmann. In his fervor for the redbreast, Kaufmann makes a bold statement about the fighting qualities of both species.

"Redbreasts fight better than any bluegill every did," he once told me.

Kaufmann gives high praise to the sunset-colored redbreast, and he knows what he's talking about. On his days off during the summer you can frequently find him fishing the waters of the Delaware around Riegelsville. Kaufmann finds the largest redbreasts in his entire region in the mighty Delaware. And because that region runs roughly from Philadelphia to Easton and west to Lancaster, that's high praise for the river.

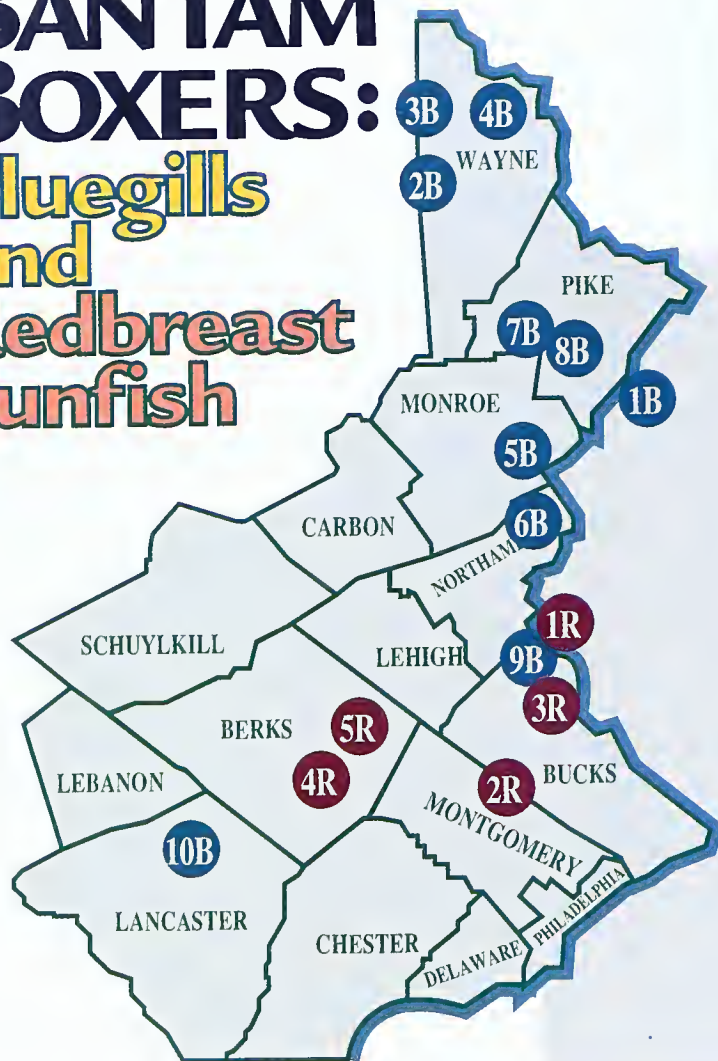
Early spring

As the warmwater season begins soon after iceout, bluegills are usually the first fish I target. In early to mid-March the weatherman sometimes offers up a gloriously sunny afternoon in the upper 50s or 60s, and that's when I rush to a local farm pond and start hunting for 'gills.

There's little weed growth in my favorite three-acre pond at this time of year and the water temperature is still chilly. But under a cloudless sun, the water temperature usually climbs a

BANTAM BOXERS:

Bluegills and Redbreast Sunfish



Perkiomen Creek

Eastern PA's Sunfish Hotspots

Redbreast

- 1R. Delaware River
- 2R. E. Branch, Perkiomen Creek
- 3R. Tohickon Creek below Nockamixon
- 4R. Schuylkill River south of Reading
- 5R. Manatawny Creek

Bluegill

- 1B. Upper Delaware River
- 2B. Long Pond, Wayne County
- 3B. Miller Pond, Wayne County
- 4B. Duck Harbor Pond, Wayne County
- 5B. Hidden Lake, Monroe County
- 6B. Lake Minsi, Northampton County
- 7B. Bruce Lake, Pike County
- 8B. Pecks Pond, Pike County
- 9B. Lake Warren, Bucks County
- 10B. Speedwell Forge Lake, Lancaster County

few degrees and this spark of energy really turns the bluegills on. The shallow water around the edges of the pond are where the sun's warmth has the most effect, so I concentrate my efforts in the shallows.

One factor that dictates my fishing technique is the color of the water. Even in farm ponds, the water is likely to be off-color from snowmelt and early rains and you must choose your offering to match that condition.

Generally, I want to crawl something small and dark slowly across the bottom. For a fly selection, this means a black or black/brown Woolly Bugger in size 8. For lures, a small black jig with a plastic tail is a front-row ticket. It need not be more complicated than that.

Along the shoreline, look for small points that extend out a few feet into deeper water. Also look for the edge of a flat with a bit of a dropoff in deeper water. Fish the flat, the dropoff and the hump of the point. If some of last year's cattails are still hanging around the edge of the pond, target these old reeds as well. The 'gills actually get in between the old cattails on a warm afternoon. You can find good fishing under these early spring conditions, but don't be surprised that when a cold front comes along the action stops.

Early spring redbreasts are not as cooperative as bluegills. Generally, I'm not very successful catching a bunch of reds in water under 45 or even 50 degrees. The exception is in a shallow stream stocked with trout, after opening day, of course.

John Soldo, another redbreast aficionado and Area 6 Fisheries Biologist, catches plenty of redbreasts in Tohickon Creek and in the East Branch of the Perkiomen while grub fishing for trout.

"They start harassing you about the last week of April," he

says. "If you are using mealy worms, the trout sometimes have to beat the redbreasts to the bait."

Late spring to early summer

When bluegills move into shallow water to spawn, you'd be foolish to fish for them anywhere else. At this time they take a wide assortment of flies and lures. A small floating crankbait retrieved with a short jerky movement—bringing the lure just under the water and letting it slowly rise to the surface—drives the little scrappers batty. Try fluorescent greens and yellows and wildly colored sunfish patterns.

For flies, I like small, weightless streamers made of Fishhair or bucktail. A high-contrast color combination such as black over white or yellow over white is all you need. Add red or pearl Krystal Flash to a size 6 or 8 streamer hook and that's it.

As for redbreasts, late spring and early summer are also a juicy season for battling these wonderful fighters.

With water temperatures in the upper 50s and low 60s, the reds gang up in the eddy-riffle interfaces where they can be taken with size 8 nymphs, small, in-line spinners, jigs and small crankbaits. Again pay attention to water color and match your offerings accordingly. The exception is crankbaits. For some reason those fluorescent green/yellow/red fat-belly sunfish combinations outfish dark crankbaits even in dark water.

Presentation consists of carefully working the eddies, casting to the upstream side and drifting your flies and lures through the deep holes. When you catch one redbreast, beat the area to death because there's a good chance there'll be plenty more in the same place. Last year it wasn't until early May that I hit my first really good day of stream redbreast fishing with flies.

In less than an hour I took about 15 fish from an area no bigger than a pool table.

Mid-May to late May is also when you should be looking to the wider rivers for excellent redbreast fishing. There, again, fish the eddies and slower currents off the main channel. Probe, probe, probe until you find the honey hole.

Like his co-worker, John Soldo also knows how good mid-spring redbreast fishing can be in the Delaware. "If the shad aren't around, you can switch over to redbreasts and have a ball," he says.

John's fishing technique is quite simple. A small weighted spinner such as a Beetle Spin is his favorite lure choice. Down-and-across casts are the norm.

"Chartreuse is always pretty hot. Yellow, too. I never really had to experiment much with colors because they're pretty eager fish," he says.

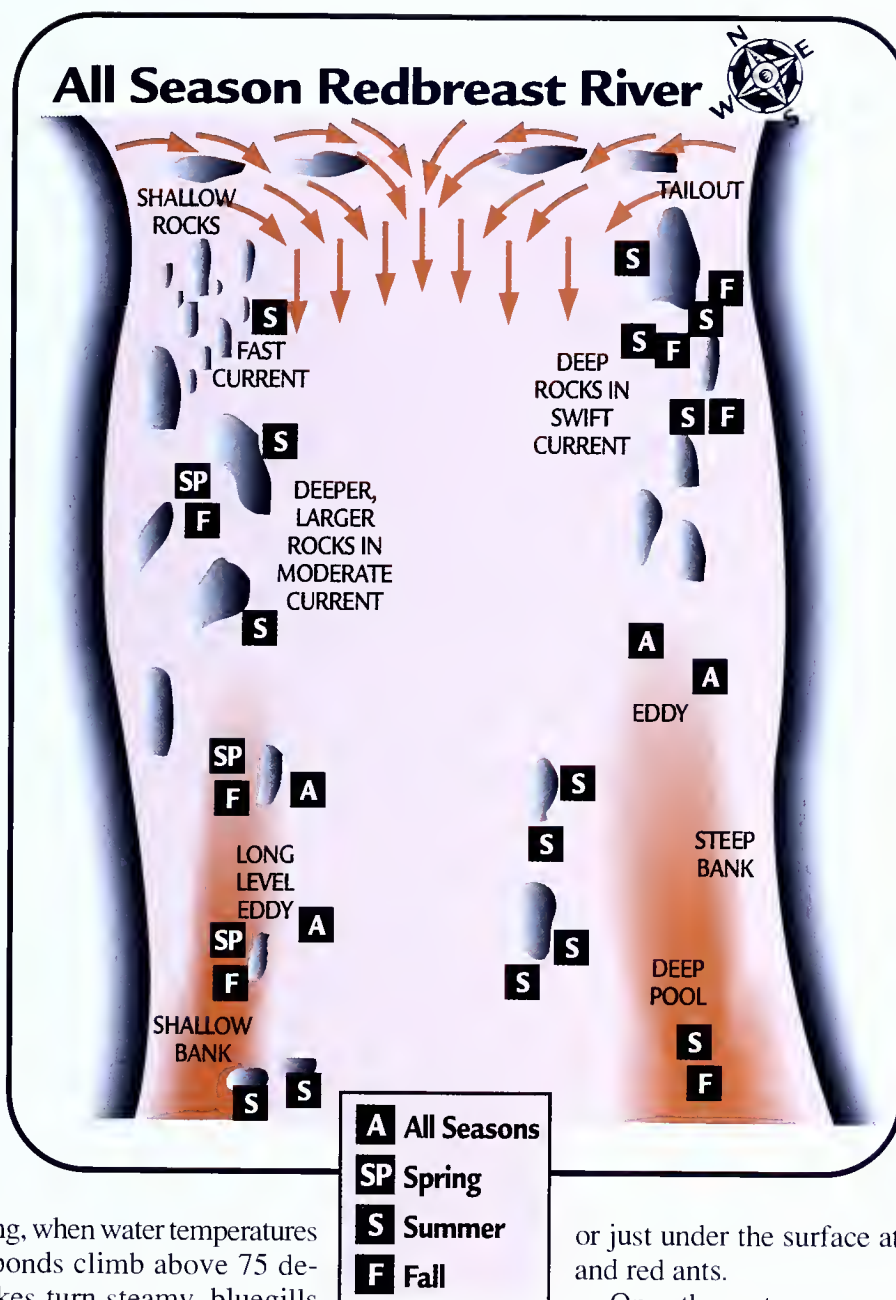
Mid-summer to late summer

Surprisingly, bluegills can get downright difficult to catch during this period. After spawning, when water temperatures in our small lakes and farm ponds climb above 75 degrees and even the deeper lakes turn steamy, bluegills can get scarce. Under these conditions, they tend to disperse into the deeper holes making midday fishing quite dull. When this occurs, fish the mornings and evenings.

While your catch rate may suffer, this is the time to use those exciting surface poppers. Gills go ape for things colored black and yellow, white and black, yellow and green and gray and white. With my trusty 5 wt. fly rod I walk or wade around the banks of a small lake using first one color, then another, then another. Many times the 'gills rise to the fly like surfacing submarines, puckering their fat lips around the popper without getting hooked. If this happens to you, don't get frustrated: it's pretty typical of them. Besides, they keep coming back again and again and it's a blast.

With redbreast, I've probably come off the small streams, especially from mid-July to mid-August, and I'm working the larger rivers. At this time, I look for reds on the deeper edge of their favorite eddies and shoreline pockets. Pay particular attention to large rocks just off the current. You'll either catch a redbreast or a smallmouth.

If the water gets to around 80 degrees in the river, it may not be the best time to catch a mess of reds. However, I've accidentally found a few cool springs in these larger waters where a bunch of redbreast will congregate when the sauna is on. Shore fishing is spotty but vertically jigging from a boat over these



deep holes produces fish. Evening popper fishing in the shallows also attracts some reds, but since the fish are scattered you have to drift into a lot of pockets to catch a lot of fish.

Early fall to mid-fall

Boy, where do I start. To paraphrase the English bard, "Get thee to the waterway."

Both bluegills and redbreast are on the feed at this time and you can find them in their most angling-suitable habitats – shallow water, small pockets, receding points for bluegills; eddies and moderately-paced pools for redbreast.

Bluegills will take poppers in mid-afternoon but they prefer nymphs, streamers, spinners and small crank-baits. Reds will take nymphs, spinners, jigs, and small spoons. For both species, I love to fish various ant patterns on

or just under the surface at this time. Try both black and red ants.

One other note, you can motor your lures at a good clip while the water temperature is still in the low 70s. In fact, I probably put more retrieval speed on my offerings in early to mid-September than I do at any time of year. The panfish generally catch up.

ANGLER

Where to go

Area 4 Fisheries Manager, Dave Arnold says there are number of places in his northeast region where anglers can find good bluegill fishing. The section of the Delaware River around the Water Gap has some nice size 'gills and there are redbreast in the Easton to Portland area. Other than the river, however, that's about it for reds in his region. A list of some of the smaller lakes where bluegills can be found includes Long Pond, Miller Pond and Duck Harbor Pond, all north of Honesdale in Wayne County; Hidden Lake in Monroe County; Bruce Lake and Pecks Pond, both in Pike County and Lake Minsi in Northampton County.

In the southeast corner of the state, redbreast are the big attraction with most tributaries of the Delaware and Schuylkill rivers holding fishable populations – surprisingly, redbreast are not as well established in Susquehanna tributaries. Soldo recommends the East Branch of the Perkiomen, the Perkiomen Creek, Tohickon Creek, the Schuylkill River south of Reading, and the Manatawny Creek for redbreast.

Flies

There are times when you might wonder what fly will not catch a bluegill or a redbreast – both fish can be that eager to bite. Nevertheless, a haphazard use of patterns and techniques may result in some poor fishing. My own selection is based on what has worked for me in the past, but I know there are other good patterns out there.

My favorite summertime bluegill fly in ponds and small lakes is a Simplified McGinty. The original McGinty was a wet fly tied for trout. Angling lore claims the fly was created in 1833 by a Chicago bartender named Leonard S. McGinty who mixed drinks and fly tying in his tavern. The classic McGinty was tied with a wing of mallard quill and a yellow and black striped body, which many have said resembles a bumble bee. I can't remember if I've ever seen a bluegill take a natural bee, but I know they relish the imitation. I tie the Simplified McGinty with a tuft of red acrylic fibers for a tail, then wind alternate bands of yellow and black chenille along the body, usually two yellow and one center black band is enough. I collar the fly with an oversized yellow saddle hackle twice as wide as the hook gap. A size 8 nymph hook (Mustad 3906B) is perfect.

The water-absorbing chenille does not float but since I don't weight the fly its fall from the surface is slower than butter off a pancake. I add life to the pattern by retrieving it in short, six-inch strips followed by long pauses.

Early in the season when the water is still in the low 60s I prefer to go right to the bottom. A size 8 Gold Ribbed Hare's Ear is one of my two best spring offerings while the other is a size 6 black Woolly Bugger with a dark purple tail and six strands of pearl Krystal Flash, three on each side of the tail. Also try a Green Weenie if the water is clear.

In the fall, I like a minnow fly, like the Heavy Metal Minnow or Chaz's Pearl Jam in size 6 and 8. The Pearl Jam is made with pearl chenille, a white marabou tail and palmered white or dun hackle.

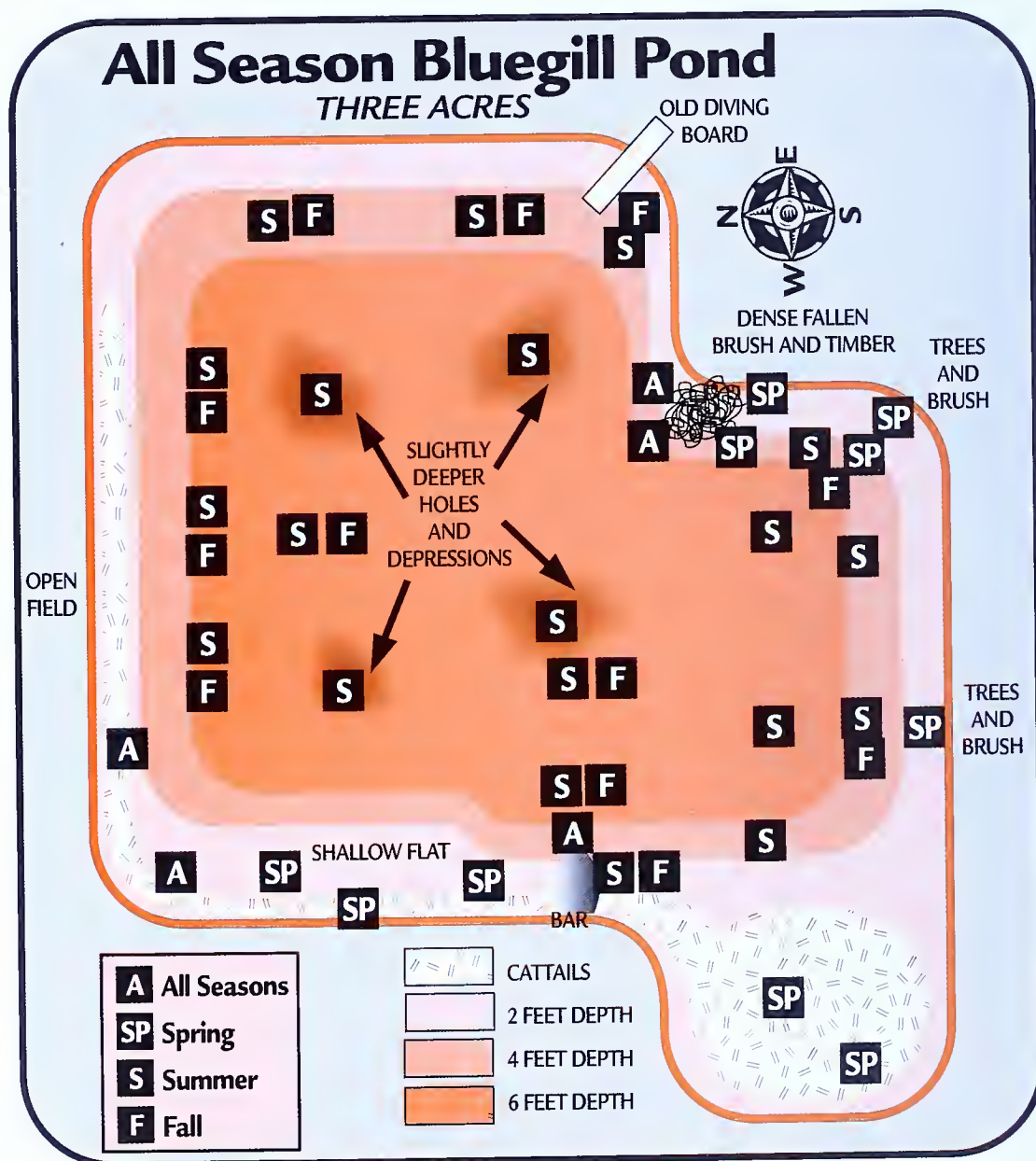
Use a small popper on warm summer evenings when the breeze is light. More than any other sunfish, bluegills will chase surface lures. They cruise around looking for surface disturbances, hoping to find a fallen insect or some other careless creature. When the water is clear and my fly is not too far away, I can see them rise slowly behind the popper than suck it down in a lip smacking smooch. They can be tough to hook when they act like this, but neat as heck to watch. Just before the sun sets, you're going to have the time of your life with bluegills.

My favorite poppers are dark green, chartreuse and a light gray popper with a red face. A McGinty colored popper is also

a real winner but I have to keep on reminding myself to make a few of them.

Like bluegills, my fly selection for redbreast is based on what has worked for me in the past but I'm sure that other anglers are successful with a whole different line-up of patterns.

My best nymph pattern is a variation of a weighted Bitch Creek Nymph. Perhaps it's the rubber legs, but this size 6 chenille-body fly is tops at producing stream and river redbreast. The pattern is tied with two pairs of legs, a body of fluorescent orange chenille and a wing case of black chenille. Some anglers have expressed puzzlement about how to get the black chenille over the body and I tell them to simply think of binding the chenille as they would a wing case over any nymph. A couple



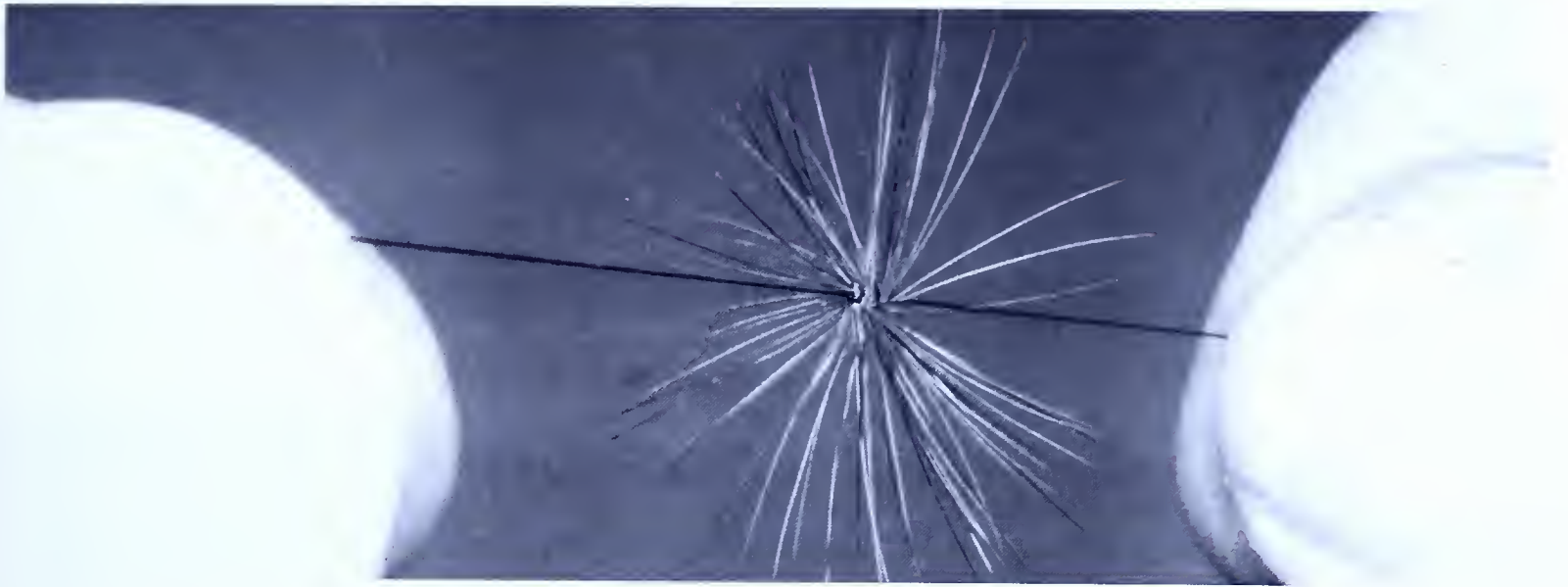
of years ago I started making my Bitch Creek nymphs with a variegated chenille – a cord alternately dyed black and orange. The wing case is unnecessary with the twin-color material and the flies tied with the variegated chenille caught just as many reds as the flies which featured two, single-colored chenilles. Just don't forget the white rubber legs.

In small streams during the spring, the same size 8 Gold-Ribbed Hare's Ear that works on bluegills is dynamite on thin water redbreast.

Into the fall I prefer a deep-riding minnow fly, particularly the Heavy Metal Minnow.

Making and Using the Spiralator

by **Chauncy K. Lively** *photos by the author*



I have had a lifelong addiction to gadgets. Over the years I've accumulated quite a few, some of which have found their way into my fly tying kit and still others serve to add weight to my angling apparel. Some years ago, at a program at a Pittsburgh Fly Fishers meeting, I was asked by my colleagues to empty my pregnant fly vest—item by item—and explain the purpose of each gadget. The program lasted a full hour.

Some of my gadgets are store-bought and others are homemade to accommodate a particular need. The Spiralator fits the latter classification.

In 1970 I developed a tool and a procedure with which I could wind a hackle on a length of 6X or 7X monofilament and tie it off without the use of thread. It was the result of a long quest to try to find a way to wind a dry fly hackle completely independent of the hook. Now I had the flexibility of several options. I could pre-dress a hackle and attach it (via the monofil) to the hook parachute-style, either above or below the hook's shank. And I could attach it either before or after the wings were in place, or I could divide the hackle fibers into two parts, bunch them and tie in the divided fibers as spent wings on spinner patterns.

I had a lot of fun with the new methodology and used it as an adjunct to more conventional styles of fly dressing. In 1975 we fished the Battenkill River in Vermont with Hoagy Carmichael and Sam Melner, then the owner of Fly Fisherman's Bookcase and Tackle Service. During an evening

fly tying session Sam became interested in the new hackling method and subsequently engaged a manufacturing firm to produce a commercial version of the tool to be marketed by Fly Fisherman's Bookcase. For want of a better name, we named the tool the Spiralator because of the hand motion involved in its use.

In the late 1970s Sam Melner moved his firm from New York to Oregon and not long afterward, a computer breakdown effectively wiped out his business. That ended the short commercial life of the Spiralator. During those years a number of friends and correspondents asked me why I didn't write a piece about the new tool and its use. Actually, I had thought about it but abandoned the idea because of the possibility it might be perceived as commercialism. However, over 15 years have passed since the demise of the store-bought Spiralator and I believe I can now, without qualms, describe how to make and use a homemade version of the tool.

Please retain these pages for future reference. You'll need them next month when we dress an Isonychia Spinner with spiralated hackle wings.

Materials required for Spiralator:

- Epoxy putty
- Plastic soda straw
- 1/4-inch wood dowel
- Size 7 sewing needle (or approximate size)
- 1/4-inch furniture tip (optional)

Constructing the Spiralator

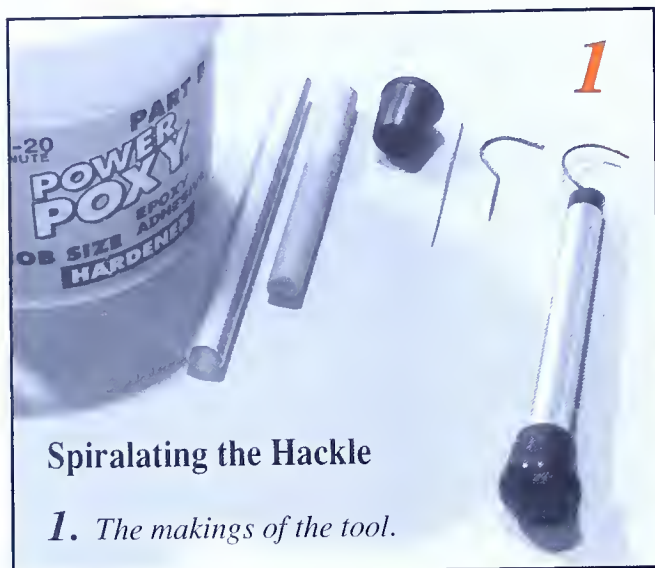
First, we need to forge the eyed end of the needle into the shape of a question mark without a dot at the bottom. Keep a small container of water handy. Grip the needle with pliers and hold it over a flame until it is red-hot. Bending should be done in several small steps. If the needle is bent too sharply it will break. After each shallow bend, dip the needle in water. Then re-heat and bend a little more. I like to use a 3/8-inch steel rod as a form around which the needle may be bent in a uniform curve. When you have completed about a half-circle, make a 45-degree bend in the opposite direction to form a straight shaft about 1/2-inch long.

Of course, remember to take appropriate safety precautions with this project.

For a handle, cut the soda straw to a length of 3 inches and the dowel to 2 1/4 inches. Insert the dowel into the straw until the end of the dowel is flush with the end of the straw.

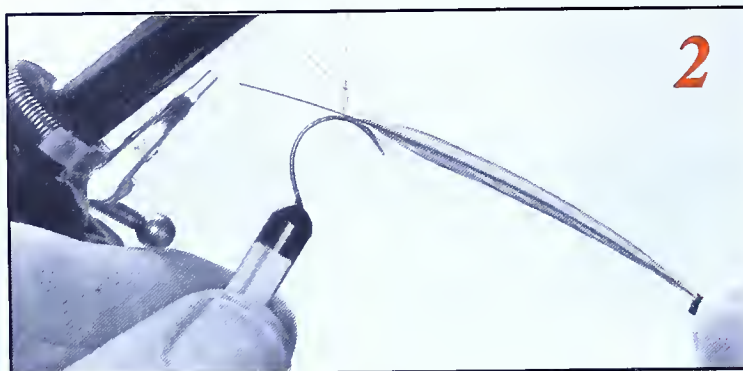
Mix the epoxy putty and fill the upper 3/4-inch of the straw not occupied by the dowel. Insert the pointed end of the needle's shaft into the epoxy and prop up the handle in a vertical position. After the epoxy has hardened, slip the furniture tip onto the end of the handle. Your Spiralator is now ready for use.

Making and Using the Spiralator



Spiralating the Hackle

1. The makings of the tool.

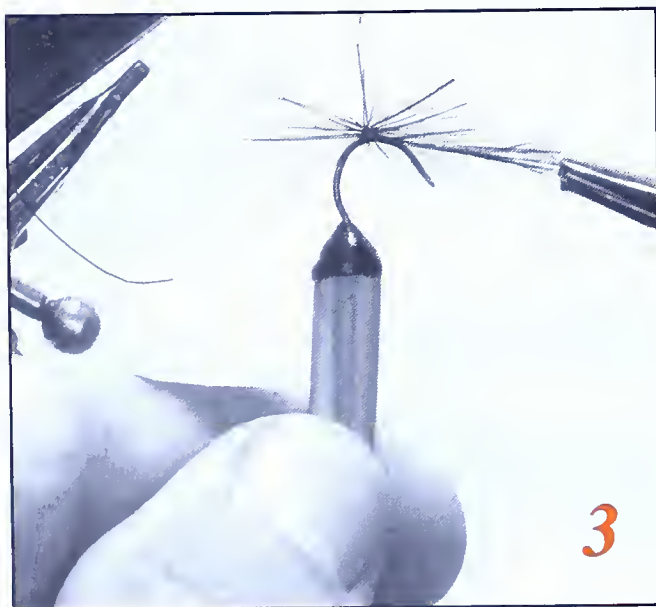


2. Cut an 8-inch length of fine monofilament (7X for flies of size 16 or smaller; 6X for larger than 16) and tie a slip noose with the free ends rather long. Keep the noose open and clamp one of the free ends in the jaws of your vise. Tentatively, exert gentle downward pressure on the noose to determine if it slides down the clamped strand. If it doesn't, clamp the other free end instead. As shown, with the left hand insert the tool's hook through the noose. With the right hand insert the hackle stem in the opposite direction, over the curve of the hook.

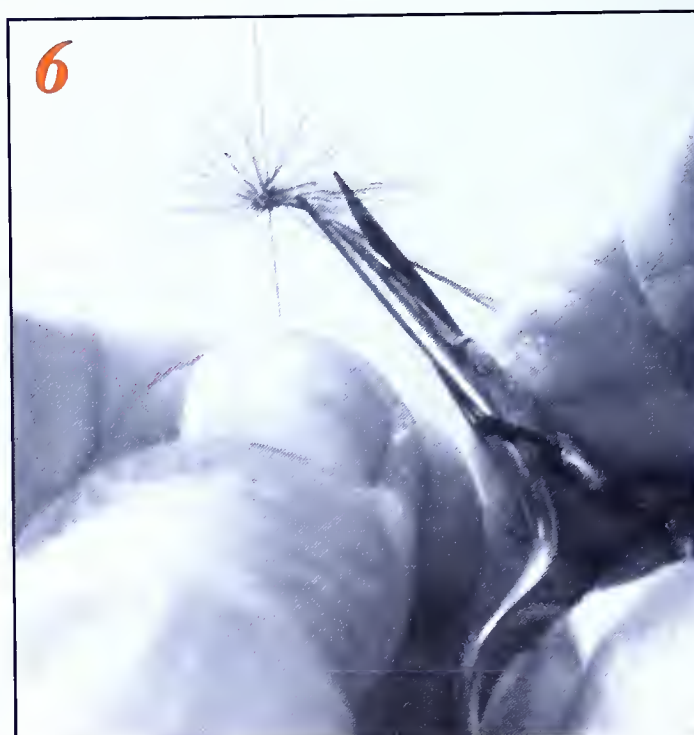
3. Exert downward pressure with the Spiralator, closing the noose firmly on the hackle stem. Hold the hackle pliers stationary, with just enough tension on the hackle to avoid slack. Now, rotate the Spiralator counterclockwise, spinning the hackle around the monofil beneath the hackle stem. Guide each turn underneath the preceding turn. Don't overhackle. Generally, three or four full turns are ample.



4. After the last turn, allow the hackle tip to hang under the weight of the pliers on the far side of the hook, out of the way. Then thread the monofil's free end through the eye of the Spiralator hook.



5. Hold the pliers lightly. With the other hand, back the Spiralator hook out of the tightened noose and pull the end of the monofil through. This snubs the wound hackle and knots the monofil.



6. Trim off the unused hackle tip and stem. Then remove the monofil from the vise. Grip the strand between the fingertips and press against the hackle's dull side to flatten any barbules out of plane.

Two Cats from Out East

by Mike Bleech



This is the story of two cats from out east. One is a native, the other moved there at a very young age. Both wear slick suits and stylish whiskers. They are welcome guests at fancy dining tables, but both are scrappers. They usually hang out at the bottom of society, and do most of their prowling at night. If you're looking for a good time, these are the cats to catch.

You can catch these cats—the native white catfish and the exotic channel catfish—at several rivers and lakes in eastern Pennsylvania. Neither gets the fanfare of more glamorous gamefish. Yet, they provide a lot of quality relaxation and recreation, plus some excellent meals.

White catfish are the native catfish of eastern Pennsylvania. Their native range,

to which they are still limited, is the Delaware River and lower Susquehanna River drainages. Stocking has spread them to some manmade lakes within this range with limited success.

"White cats tend to be intermediate in their habitat preferences between channel cats and bullheads," says Robert Lorantas, Commission Warmwater Unit Leader.



Shrimp makes a great catfish bait. Other proven baits include chicken livers, live minnows, cut bait, night-crawlers, crayfish and commercial "stink" baits. Cut bait is pieces of fish. They don't provide the vibration that live minnows produce, but cut bait puts a lot of "smell" in the water, which attracts catfish.

In rivers, white catfish tend to occupy rocky bottom areas out of the main current. In the Susquehanna, look for them along the bedrock ledges. Finding them in lakes is generally more of a random hit or miss process.

White cats tolerate more salinity than channel cats. They can be caught in the tidal portion of the Delaware River, and they might be more active in cooler water.

White cats eat a variety of foods, similar to many of their kin. "I do know that they consume some small quantities of vegetation," says Lorantas. "But invertebrates and fishes comprise the bulk of their diet."

Maximum size for white cats in Pennsylvania is about 23 inches. A 22 1/2-inch, 7 1/2-pound white catfish was collected by Commission biologists from Lake Ontelaunee. They mature at 7 to 8 inches in their third or fourth year. The average size caught by anglers is less than 13 inches.

White cats are not as popular with anglers as are channel cats anywhere both occur, which includes most of the waters where white cats occur. Many anglers do not even know what they are. In parts of the Schuylkill River near Pottstown and Phoenixville, they are called blue cats, though the nearest blue catfish are in the Ohio River. Often they are confused with bullheads.

The native channel catfish range in Pennsylvania is the Ohio River and Lake Erie drainages. However, now they have been introduced to most of the state with sometimes exceptional results. In fact, the channel cat is more common than the white cat in most of the white cat's native waters.

"White catfish are kind of a rarer species," says Lorantas. "Why they tend to predominate in some reservoirs and not in other parts of their drainage is something that has puzzled us, and we are still

surveying. I don't know that we've put our finger on what would cause the channel catfish to dominate."

At least one explanation is that the habitat has changed in the lower Susquehanna River, where several power dams have created lake-like environments. However, white cats also inhabit lakes, and this does not explain the success of channel cats in other waters.

Few anglers regret the channel cats introduction to our eastern counties. They are the targets of nearly all catfish anglers, with white cats incidental catches.

"I don't know of anyone who would say white cats are a targeted species," says Kaufmann. "Although, I'm sure there must be some people who do go specifically for them."

In addition to being generally more abundant, channel cats get appreciably larger than white cats. The average size caught by anglers varies considerably from place to place, and from year to year, at least partially because of stocking. You may get into channel cats that average 1 1/2 pounds in one part of the Susquehanna River, and then the next night a mile downriver you might catch nothing smaller than 6 pounds. Ten-pound channel cats are quite common.

Our state record channel cat is 35 pounds, 2.5 ounces. That might be exceeded considerably because the North American record, according to the National Fresh Water Fishing Hall of Fame, is 58 pounds. Several line class records are reasonable goals for eastern Pennsylvania anglers.

Channel cats eat just about anything they can catch, it appears, and some vegetation. The strangest things Kaufmann has found in their stomachs were a rat, a cardinal and a chunk of styrofoam.

Like other catfish, channel cats might be just about anywhere in lakes. In riv-

ers they seem to prefer the main river channel, often at the bases of riffles and rapids. The tailwaters of dams are usually channel cat hotspots.

Hotspots

Kaufmann, who cheerfully admits to being a catfish enthusiast, suggests several eastern Pennsylvania rivers and lakes for better than average catfishing.

Among the better white catfish waters are Lake Ontelaunee, Green Lane Reservoir, and Chester-Octoraro Reservoir. Watch out for Lake Luxembourg, too. Recent stocking appears to have been quite successful. White cats are common in the Susquehanna and Delaware rivers, but only in the upper Delaware is the white cat more common than the channel cat. They are in many other lakes, rivers and creeks, but generally they are overshadowed by channel catfish.

Some of the finest channel catfishing in the northeastern states is in the Susquehanna River, particularly in the power company lakes. You can expect to see lanterns along the shoreline on summer evenings. Even though the white cat is the native here, and the channel cat the intruder, channel cats are much more abundant.

"At the fish lift at Conowingo Dam," says Kaufmann, "only one out of every six catfish is a white cat, about 18 percent."

Channel catfishing is very good in the Delaware River from above the tidal water up at least to the Delaware Water Gap. The Schuylkill River is good, as are Chester-Octoraro Lake, Blue Marsh Lake, Lake Nockamixon, Green Lane Reservoir, Lake Galena, Lake Luxembourg and Lake Redman. Struble Lake, in Chester County, might be an up-and-coming channel cat fishery based on a biological survey done two years ago.

The biggest channel cats in eastern Pennsylvania, some in excess of 12 pounds, are most often caught in the rivers, Lake Nockamixon, Blue Marsh Lake and Lake Galena. However, big channel cats sometimes show up in surprising places.

Fishing tactics

One of the nice things about catfishing is that you do not need a lot of specialized or expensive fishing tackle. Any fishing outfit you currently have should be adequate. The only critical requirements on tackle occur when you tangle with a big channel catfish. A channel cat that weighs 20 pounds, maybe even twice that much, is a load. Forget any nonsense about other, more glamorous gamefish fighting harder. It simply is not true. Channel cats fight with the best of them. They do not go airborne, but they make strong runs, and their bottom-hugging tactics quickly abrade line.

A basic terminal rig for catfish consists of a hook, a sliding sinker and a swivel. Tie the hook to the end of the line, then cut the line about two feet above the hook. Next, slide the sinker onto the main line, and then tie a swivel to the end of the line. Finally, tie the leader with the hook at the end onto the swivel.

This sliding sinker rig lets the catfish move the bait without dragging the sinker. Catfish are not terribly fussy about such things, but dragging the sinker is liable to get it snagged on the bottom. Then the catfish will drop the bait, and you might be out a terminal rig and a nice fish.

Anchoring the bait on the bottom in a stiff current is the primary objective of the sliding sinker rig. You might also need a heavier weight for making long casts. Carry an assortment of sliding sinkers from 1/4-ounce for milder current, to 2 ounces for stronger current and deeper water.

White cats and smaller channel cats often feed aggressively in the tails of riffles. A simple hook and splitshot rig may be best in this situation. Use an appropriate bait hook at the end of the line, and pinch a splitshot on the line about 18 inches above the hook.

This rig should drift along the bottom. Instead of carrying several different sizes of splitshot, just carry a couple of shot sizes, and add or remove shot to get the drift you want. You should feel the shot dragging along the bottom. If the shot hangs, just lift the rod tip to free it, and to resume the drift.

A popular rig below the power dams on the Susquehanna River consists of a 2-ounce sinker at the end of the line, and two hooks on leaders attached to the main line. This setup, a high-low rig, can be constructed in several ways. Try this one. Tie a swivel at the end of the main line. Tie another swivel into the line about two feet above the end swivel. Tie two bait hooks onto 12-inch leaders, and tie one

Most of the time, catfishing means still-fishing, particularly when you're after big channel catfish. You want to give catfish a chance to find your bait by odor, or by the vibrations live minnows create.



Two Cats from Out East

of these leaders to the lower end of each swivel. Finally, tie the sinker to the end of a light leader, something that will break easily before the main line. Then tie the other end of that leader to the end swivel.

Two things are accomplished with this version of the drop sinker rig. The swivels reduce line twist. Otherwise, catfish can twist your line into a mess. Also, the light sinker leader will break before the main line, so if you get hopelessly snagged you lose only the sinker. This saves both time and expense. Losing two hooks, two swivels and a sinker with each snag can get into an uncomfortable amount of money in snag-infested tailwaters.

Most of the time, catfishing means still-fishing, particularly when big channel cats are the target. You want to give catfish a chance to find your bait by odor, or by the vibrations live minnows create. But still-fishing does not mean throwing out the bait and forgetting about it until a catfish finds it. Give the catfish time, but not an eternity. After 20 minutes or so without action, move the bait.

Most serious catfish anglers have their favorite baits. The list may be endless. Some proven baits are chicken livers, live minnows, shrimp, cut bait, nightcrawlers, crayfish and commercial "stink" baits.

Cut bait is pieces of fish. This offering doesn't emit vibrations like live minnows, but it does send out more odor.

As a final thought, the best catfishing is usually at night. What better way to spend a summer night than reclining on a boat seat or lawn chair along a cool river or lake, in the balmy dark air! Catfishing is one of the more relaxing kinds of fishing. Isn't that exactly what you need after a hot, sweaty day of work?



Recent History of Catfish Stocking in Eastern PA

Catfish stocking in eastern Pennsylvania has been a very productive venture. The only native catfish large enough to be of interest to anglers are the white catfish, brown bullhead and yellow bullhead. These species are fine panfish, but the channel catfish, which has been introduced through stocking, is a gamefish in every sense. Channel cats are now more abundant than the native white cats.

Both channel cats and white cats are typically stocked every other year in any given waterway. This is done at the request of the various area fisheries managers, according to Lorantas. Usually the goal of stocking catfish is to establish a self-sustaining population, but most lakes must be stocked periodically to maintain a fishery. Channel cats have not demonstrated much natural reproduction in Pennsylvania lakes.

"In many instances, particularly in lakes, stocking is a put, grow and take scenario," Lorantas says.

The Commission began large-scale channel cat stocking in 1960, though some were probably stocked before that. Here is a list of eastern Pennsylvania lakes where channel catfish were stocked last year.

<i>Waterway</i>	<i>County</i>
Conewago Lake	York County
F.D.R. Park Lake	Philadelphia County
Hanover Dam	York County
Leaser Lake	Lehigh County
Struble Lake	Chester County
Towhee Lake	Bucks County
Tuscarora Lake	Schuylkill County
Mauch Chunk Lake	Carbon County
Miller Pond	Wayne County
Neshaminy Creek	Bucks County
Nockamixon Lake	Bucks County
Pine Run Reservoir	Bucks County
Promised Land Lake	Pike County
Prompton Reservoir	Wayne County
Speedwell Forge Lake	Lancaster County



White Catfish/Channel Catfish Identification

Many of the largest white catfish caught by anglers are mistakenly identified as channel catfish. The two species are similar in appearance. Both vary considerably in color. Both can be distinguished from bullheads by their forked tails. Though channel cat tails are generally more deeply forked than those of white cats, they become more rounded as they mature.

The easiest form of identification between the white and channel cats is the number of anal fin rays. White cats have 22 to 25 anal fin rays. Channel cats have 23 to 29, but usually more than 26 anal fin rays.—MB.



On the Water

with Robert L. Petri

Around the Island

Just about in the dead center of the southern Erie County glacial pothole called Lake LeBoeuf, there is an island of sorts. Its sparse crown of willows and dying snags is often inundated to ankle level by the freshets from LeBoeuf's three strong inlets, and dry ground is a sparse commodity there in any season. Still, we called it "the island."

Off the edges of the island were the places that held the fish. A major sandbar extended off the island's west side, and it hosted a weed bed rich in minnows and other aquatic life. From the southernmost point of the island, a single finger of a weedline extended out to touch and intertwine with a like protrusion extending from the lake's southwest shoreline. The dense weeds drew the minnows, which drew the panfish, which drew the bass and muskies.

It was here, in these places around the island, that we most often saw him. He was a fixture on the little lake—well past retirement age, a solitary figure in a weathered cap and light windbreaker. Two rods extended from the rear of the boat and the outboard coughed the staccato rhythm of trolling speed. Round and round the weedbeds and the island he would go, winding through the channels of open water, searching for big fish.

Every once in a while he would pause in his travels and stop and talk for a moment. We would show him the good stringer of crappies the morning had brought, and he would smile and nod. But the crappies weren't his thing. When asked how he was doing, as often as not he would shrug and say that he had "something" on at first light this morning. It had seized his Creek Chub or oversized Rapala, been there for a second, and then was gone. Big fish. Likely a muskie. That was what brought him out on the lake every day just as the new light was beginning to touch the water, and that was what made him troll the endless loops around the island and along the adjoining shoreline.

More often than not, though, he would just wave as he passed. A single hand flashing in greeting while the other grasped the handle of the outboard to steer the boat along the weedline. And then he would be gone.

His name was Fred Koehler and we thought of him as the wisest of the wise in the ways of Lake LeBoeuf. He had retired and moved from Pittsburgh up to Waterford to be with the lake always. We venerated him, and always watched for him when we were anchored off the island filling the bucket with crappies. We wanted to know what he knew, because we knew he knew it all.

One bright Saturday morning in June, Fred paused from his trolling to talk for a moment. I was maybe 12 or 13 years old at the time. With the brashness of youth, I asked him what was the best way to catch the walleyes that lived in the little lake. He explained about a technique involving a big bobber with a 5- or 6-inch chub hooked lightly through the lips suspended below. He told us where to fish it—just off the island on the south side along the edge of the weeds. He told us this was where the walleyes were early in the morning, but not to be surprised if we came up with a big bass or even a musky in the bargain. They were there at that time, too. We nodded and thanked him. He moved on.

I spent most of the next week peddling papers, chasing lawn mowers and yanking weeds out of the garden, all the while thinking about big bobbers, first light and the weedbed.

Saturday morning finally arrived, and while there was a growing glow around the treetops to the east, it was still dark when we approached the weed bed. The chubs had been collected the evening before. I clipped the big bobber to the line just about at the depth that Fred had suggested. Then I reached into the bucket and grabbed one of the wriggling chubs and baited up. In the half-light, I cast the whole thing as close to the edge of the weeds as I could, just as Fred had said to do. My Dad and brother followed suit. The daylight grew stronger. The morning mist rode low on the water. We sat back and waited.

I had the only take of the morning. The bobber jiggled and then darted to and fro frantically. Then it began to move, cutting an inexorable "V" across the flat surface of the lake. "Let him run with it," my Dad said. I did the best I could. I was only 13, after all.

Just as I thought I was going to pop from anticipation, my Dad said, "Hit him!" I hauled back on the rod with both hands and dug my feet into the bottom of the boat. The rod arced and the line began to melt from my reel. The bobber disappeared. We couldn't see it, but we could see the mighty wake it was leaving as it was towed toward the weeds by whatever was on the other end.

In a few seconds it was over. The line went limp, and the bobber popped through the surface and just sat there. Gone... We spent the rest of the morning filling the bucket with crappies.

Later, we saw Fred. But he didn't stop. Just a wave and the passing rumble of the motor. I wish he would have hauled up and talked just for a moment. I would like to have had the chance to thank him for the advice and tell him that crappies were OK, but that I was after big fish now. Just like him.



Patch complaint

I recently went to purchase my 1996 Trout Stamp and at that time was given a summary of the 1996 fishing regulations and laws. Having read the summary I immediately became interested in the first Pennsylvania Fish & Boat Commission Patch. I promptly called your office and was informed that only 5,000 were made and that they were all sold. I was greatly disappointed, as were many other fishermen and boaters who wanted this patch.

We know of a scalper who was selling them for \$35.00 at the Hamburg Sport Show.

Angry, I had prepared a letter to send to you, but then first decided to call Commissioner Lacy. I was boisterous, but he was very polite. He explained that the Commission had nothing to do with this scam. I apologized.

The way this was offered made many of us feel misinformed.

Will you please help clean up the cynicism and hostility that is out there by writing an article in the next issue of your magazine? Explain this matter, informing all that the Commission is not involved.

By the way, my grandson is looking for me to sew a patch on his jacket.—*John D. Whitmyer, West Lawn, PA.*

Thank you for your letter regarding the availability of the Harvey's Creek Patch. I would like to apologize for any misunderstanding about these patches. Commissioner Lacy's response to you was accurate, and after considering your suggestion, I have asked the Director of the Bureau of Boating and Education to prepare a short article in *Pennsylvania Angler* to explain that these patches were sold by the contractor for the Trout/Salmon Stamps and not by the Fish and Boat Commission.

Enclosed you will find a 1996 Pennsylvania League of Angling Youth (PLAY) patch that you will be able to sew on your grandson's jacket. I know this doesn't replace the patch you were unable to obtain, but I am sure it will be appreciated by your grandson.

The Pennsylvania Fish and Boat Commission is committed to serving the anglers and boaters of this Commonwealth, and we appreciate receiving comments and suggestions from dedicated conservationists like you.—*Peter A. Colaungelo, Executive Director.*

From the patch publisher:

The PA Fish & Boat Commission's 1996 Patch was produced and distributed in conjunction with the 1996 PA Trout/Salmon Stamp Print Program by the official publisher, Wilderness Editions.

The prints and patches were sold through direct mail and advertising. The ads and press releases were in PA magazines and newspapers, beginning in October 1995. Brochures describing the prints and patches were sent to art galleries and limited-edition art collectors.

The amount of patches (5,000 available) was determined by Wilderness Editions after researching the amount of patches produced and sold in previous years. The quantities were made public through sales information and press releases, making a second run impossible. The response to the program was overwhelming and the patches sold out quickly.

Wilderness Editions is reviewing ideas for the series to make future patches available to more collectors.

The PA Stream Series, featured on the PA Trout/Salmon Stamp, will highlight Mercer County's Neshannock Creek in 1997. The winning painting will be produced as a limited-edition print and patch, available in October 1996. For more information contact: Wilderness Editions at 814-632-7645.



Pontoon boat suggestion

With the increasing popularity of pontoon boats, I believe there is a need to evaluate the safety of operating these boats with a 10-horsepower engine. Pontoon boats in the 21- to 28-foot range can weigh 1,000 pounds, and because they make good fishing boats, we will see more of them on lakes in years to come.

Because of the greater weight of these boats, a 10-horsepower engine does not have sufficient power to control the boat safely in close quarters such as docking and retrieving operations—especially when wind or current is a factor. The 10-horsepower rule serves a good purpose and should be maintained, but with the increasing popularity of the heavier pontoon boats, perhaps the Commission should look into the possibility of assigning horsepower by weight. This limit could be high enough to allow safe operation, but low enough to make speeding unlikely.—*Thomas C. Llewellyn, Pittsburgh, PA.*

I understand your point concerning larger craft on limited horsepower impoundments. Unfortunately, there is no way to be totally fair in regulating these waters. Specific regulations pertaining to each impoundment are the only equitable method because each waterway has its own characteristics. The intent of limited horsepower is to reduce the speed, and on some waters, the size of boats. Larger pontoon boats and large runabouts are not very maneuverable with small outboards.

I am the boating accident review officer for Pennsylvania, and to date I have not received any reports of accidents caused by insufficiently powered pontoon boats. It is difficult to comment on a specific area without knowing the impoundment to which you are referring, but horsepower regulations are usually based on the specific characteristics of the resource.—*Daniel G. Martin, Boating Safety Program.*

Pine Creek proposal

I am writing in regard to the enclosed article, printed in the *Williamsport Sun-Gazette*, suggesting a Delayed-Harvest Area on Pine Creek near Slate Run. My beliefs lead me to be completely opposed to this proposal.

First of all, Pine Creek's summer water temperatures are not conducive to good conditions to sustain a viable trout population except at the mouth of feeder streams. Thus, the June 15 opening date does not indicate an area suitable for angling.

Secondly, this area has plenty of restricted areas including Slate run, Cedar Run and a section of Little Pine Creek. This Delayed-Harvest Area would only benefit the fly fishermen who currently may fish *anywhere* on Commonwealth waters. This proposal is designed to prevent bait fishermen, who buy the bulk of fishing licenses, from utilizing another section of a popular stream.

Thirdly, at a time when the Pennsylvania Fish and Boat Commission is attempting to encourage young anglers to participate, this idea will not benefit young or new fishermen. Many of the visitors to the Pine Creek area are family groups looking to fish in a convenient location. The creation of this area would deter many persons from using Pine Creek, thus resulting in fewer license sales.

I believe most anglers are not looking for more restricted areas. Fly fishermen have no restrictions placed on them. Please do not permit another injustice to be served on the anglers of Pennsylvania.—*Jeff Raisch*

The reach of Pine Creek near Slate Run does not meet the current Commission policy criteria for a Delayed-Harvest Area. Pine Creek in this area is about twice as wide and also too warm (although cool-water refuge is provided by tributaries) to qualify. In addition, guidelines stipulate that there should not be other special regulation areas like those on Slate Run, Cedar Run, and Little Pine Creek in the immediate area.

The purpose of Delayed-Harvest is to provide year-round angling opportunities with high catch rates to the broadest cross section of anglers while promoting catch and release and recycling of stocked trout. All recent Delayed-Harvest areas in northcentral PA have been established as artificial lures and flies to allow both fly and spin angling (bait is excluded because of its higher hooking mortality). Over the years, anglers have told us the key factors attracting them to use Delayed-Harvest areas were the year-round fishing opportunity and higher than normal catch rates because of recycling of trout under catch and release for much of the season.

With Delayed-Harvest areas available, young or new enthusiastic anglers who often acquire fishing equipment at Christmas or in the first warm weather of early spring can fish Delayed-Harvest areas because they are open year-round when other stocked trout waters may be closed. Also, Delayed-Harvest



photo-Art Michaels

Neshannock Creek Painting Winner in Trout Stamp Contest

An acrylic painting depicting Neshannock Creek, Mercer County, has been named the winner of the Pennsylvania Fish and Boat Commission's annual Trout/Salmon Stamp & Print Art Competition. The image, painted by Christopher Leeper of Youngstown, Ohio, will appear on the 1997 Trout/Salmon Stamp. Shown with the winning artwork are judges (left to right) Al Mayhew, retired Bureau of Administrative Services Director; Del Graff, Bureau of Fisheries Director; Commissioner Enoch S. "Inky" Moore, Jr.; Commission Deputy Executive Director/Chief Counsel Dennis Guise; Trout Stamp Publisher George Lavanish, of Wilderness Editions; and Graphic Services Section Chief Ted Walke.

The stamp is a permit required of all licensed trout anglers, but the quality of artwork featured on the stamps has made them prized possessions for collectors. The Neshannock Creek scene is the second "streamscape" in the latest series of Trout/Salmon Stamps.

The 1996 stamp features Harvey's Creek in Luzerne County. The first series of stamps, those issued in 1991 through 1995, displayed various species of trout found in Pennsylvania.

Leeper's piece, in addition to appearing on the stamp, will be available as a limited edition art print and as a collector's patch. Both the patches and the prints are available only through the Commission's endorsed publisher: Wilderness Editions, RD 1, Box 73, Warriors Mark, PA 16877, or call (814) 632-7645.

The winning picture was judged best by a six-member panel from a record 135 entries. Some 107 artists competed in the contest, also a record high. For his work, Leeper will receive a \$3,000 prize as well as royalties for signed prints, stamps and mini-prints.

Luther Hall of Mystic, Connecticut took second-place honors for his painting of Loyalsock Creek. Bob Anderson's (Volant, PA) rendition of Neshannock Creek came in third.

areas usually provide a higher catch rate because up to June 15 all trout must be released to be caught again. Thus, Delayed-Harvest areas are less restrictive and allow broad participation by young, old, experienced and novice anglers.

Thank you for your comments and interest in this program. If you have any other comments, do not hesitate to contact my office.—*Bruce Hollender, Area 3 Fisheries Manager.*



**LIFE
JACKETS.**

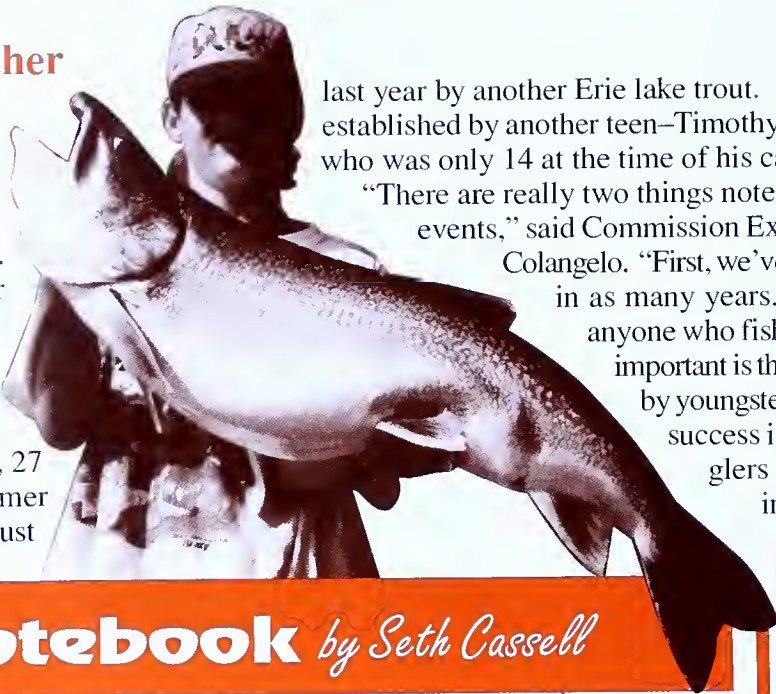
**They
Float.
You Don't.**

One Teen Replaces Another in Record Books

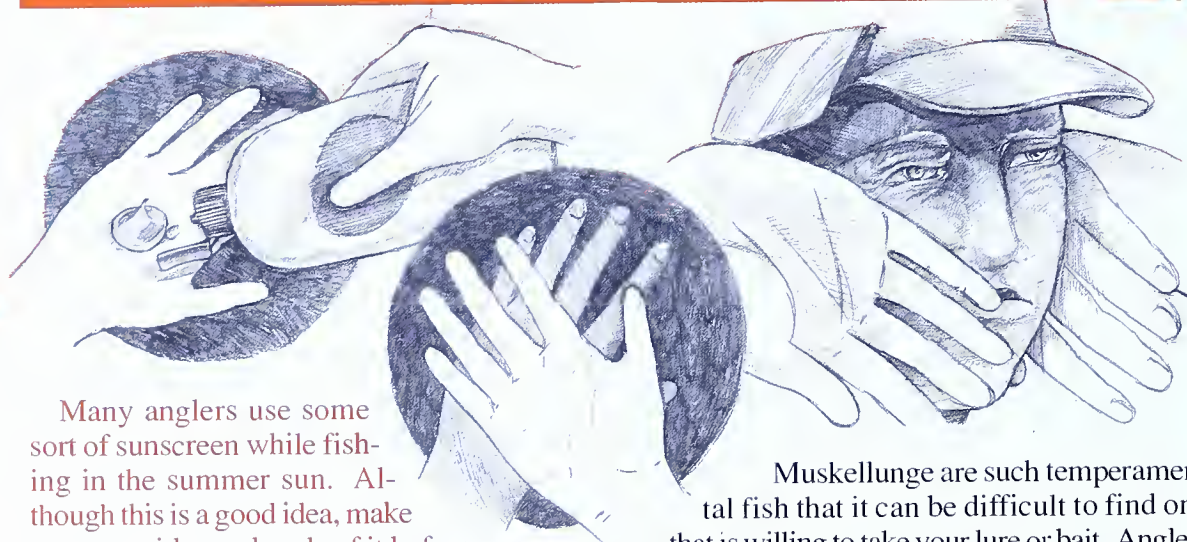
Tom Illar, Jr., of Apollo, was trolling a Northern King spoon on May 19 when a monster fish took off with the lure. When the battle was finally done, Illar was holding the biggest trout he'd ever caught. According to the Commission, the fish was actually the biggest lake trout anyone has ever taken in Commonwealth waters. Illar's lake trout, 27 pounds, 13.9 ounces, broke the former record of 27 pounds, 10 ounces, set just

last year by another Erie lake trout. Ironically, that mark was established by another teen—Timothy Strobel of New Stanton, who was only 14 at the time of his catch.

"There are really two things noteworthy about this turn of events," said Commission Executive Director Peter A. Colangelo. "First, we've had two lake trout records in as many years. That's encouraging for anyone who fishes Lake Erie. Even more important is that these catches were made by youngsters. Youth participation and success is exciting news for all anglers and for the future of fishing itself."



Angler's Notebook *by Seth Cassell*



Many anglers use some sort of sunscreen while fishing in the summer sun. Although this is a good idea, make sure you rid your hands of it before you handle lures. The smell of the lotion on them may dissuade fish from striking. Apply sunscreen and insect repellent from the back of your palms so that you don't spread these items from your fingers onto tackle, line and lures.

When fishing for river bass during August, when water levels are usually low, use smaller, less aggressive lures. Also, use lower pound-test line than normal. Concentrate your fishing during periods of low light intensity. These adjustments in tackle and tactics will increase your summertime success.

If you enjoy eating panfish, here's a good way to preserve them if you do not wish to prepare them the day of the catch. Get a gallon-size zip lock bag or a small plastic container. Put the fish in it, and then fill with water. Place in the freezer. When you are ready to prepare and eat the fish, simply thaw out the ice block. By doing this, you eliminate freezer burn.

Muskellunge are such temperamental fish that it can be difficult to find one that is willing to take your lure or bait. Anglers should try to cover as many areas as possible. In impoundments, troll in known musky haunts. In rivers and creeks, drifting with a canoe or john boat is often the best method. Use big baits. Muskies don't think twice about taking a 6-inch sucker.

"Trout" are actually not native to Pennsylvania. Rainbow trout were introduced from the West Coast, and brown trout were introduced from Germany. Contrary to common belief, brook trout are not true "trout." They are actually char, which are characterized by a dark body with light spots. "Trout," on the other hand, are identified as having light bodies with dark spots.

By now, most hatches on Pennsylvania trout streams have subsided. But flyfishermen can still have plenty of surface action using terrestrials, land insects that accidentally end up on the water's surface. Imitations of crickets, grasshoppers, red and black ants, inch worms, and even bumblebees all produce wonders on summer trout streams.

illustration: Ted Walke

The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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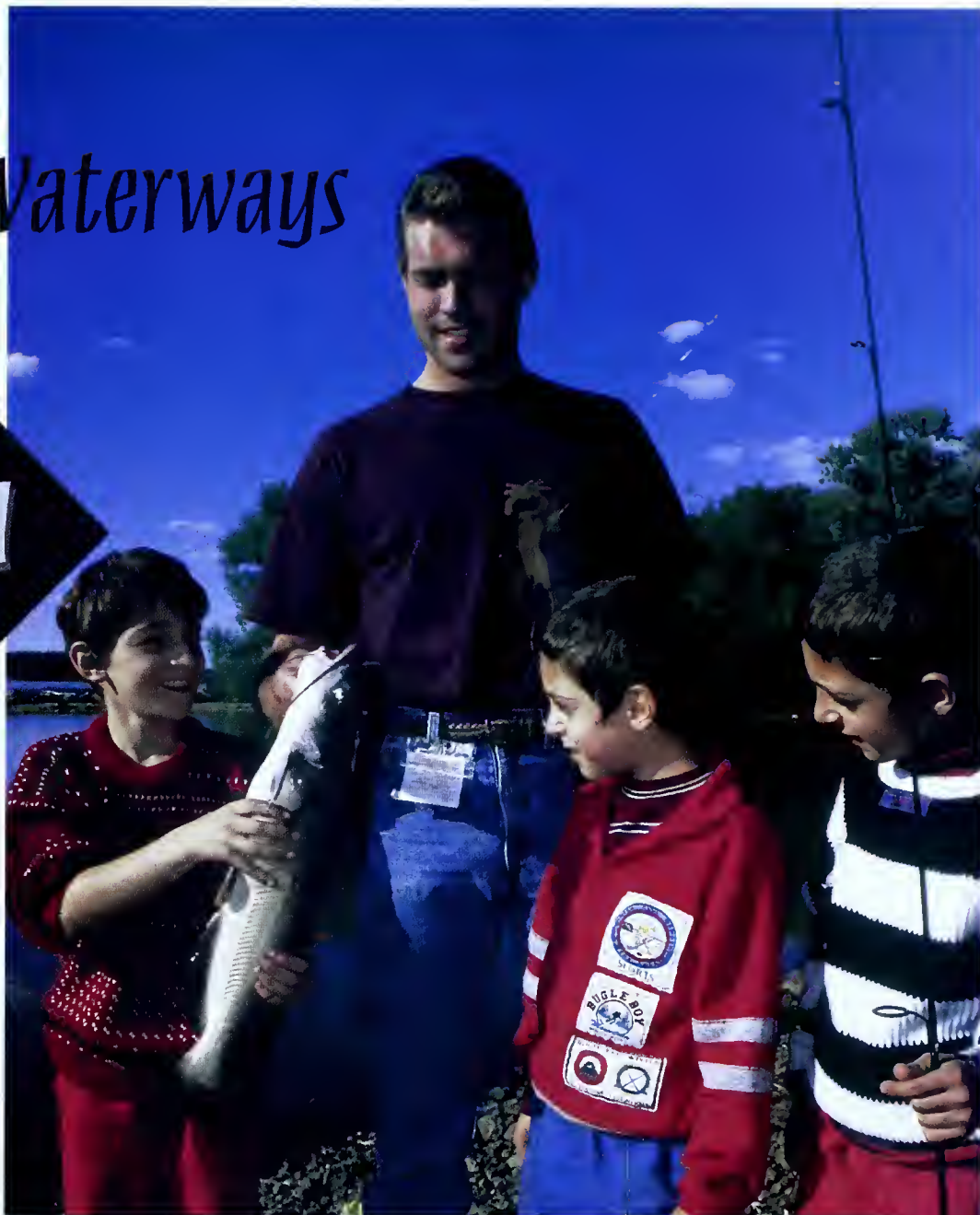
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PA's Top 36 Waterways

for Larger Channel Catfish

Richard Snyder, Chief of the Commission's Division of Fisheries Management, and the Commission's Area Fisheries Managers suggest the following waterways for going after our state's biggest channel catfish.



Water

County

Acme Dam	Westmoreland
Allegheny River	Allegheny/Westmoreland/ Armstrong
Beaver River	Beaver
Beltzville Lake	Carbon
Blue Marsh Lake	Berks
Bridgeport Dam	Westmoreland
Canonsburg Lake	Washington
Chester-Octoraro Lake	Chester
Conewago Lake	York
Cross Creek Lake	Washington
Donegal Lake	Westmoreland
Dutch Fork Lake	Washington
Juniata River	Perry
Kyle Lake	Jefferson
Lake Arthur	Butler
Lake Galena	Bucks
Lake Wallenpaupack	Pike/Wayne
Lake Somerset	Somerset
Lehigh River	Lehigh/Northampton

Water

County

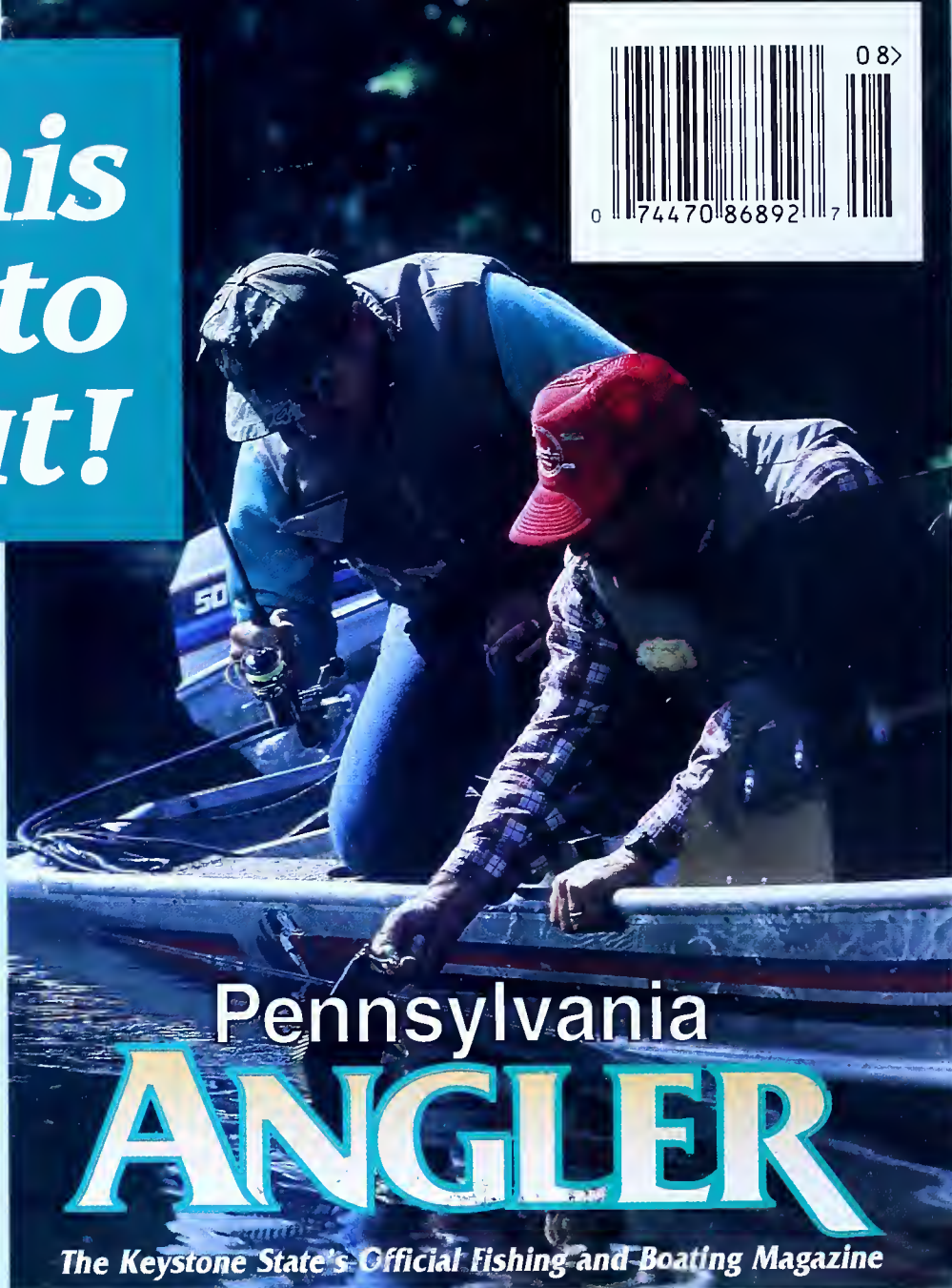
Lower Twin Lake	Westmoreland
Loyalhanna Lake	Westmoreland
Mahoning Lake	Armstrong
Monongahela River	Allegheny/Westmoreland/ Washington/Fay/Greene
North Branch	Bradford/Wyoming/Luzerne/ Columbia/Montour
Susquehanna River	Bucks
Nockamixon Lake	Allegheny
North Park Lake	Allegheny/Beaver
Ohio River	Crawford
Pymatuning Lake	Mercer
Shenango River	Mercer
Shenango Lake	Dauphin
Susquehanna River	Forest
Tionesta Lake	Westmoreland
Upper Twin Lake	Lycoming/Northumberland
West Branch	
Susquehanna River	
Wisecarver Reservoir	Greene
Youghiogheny River	Fayette/Westmoreland



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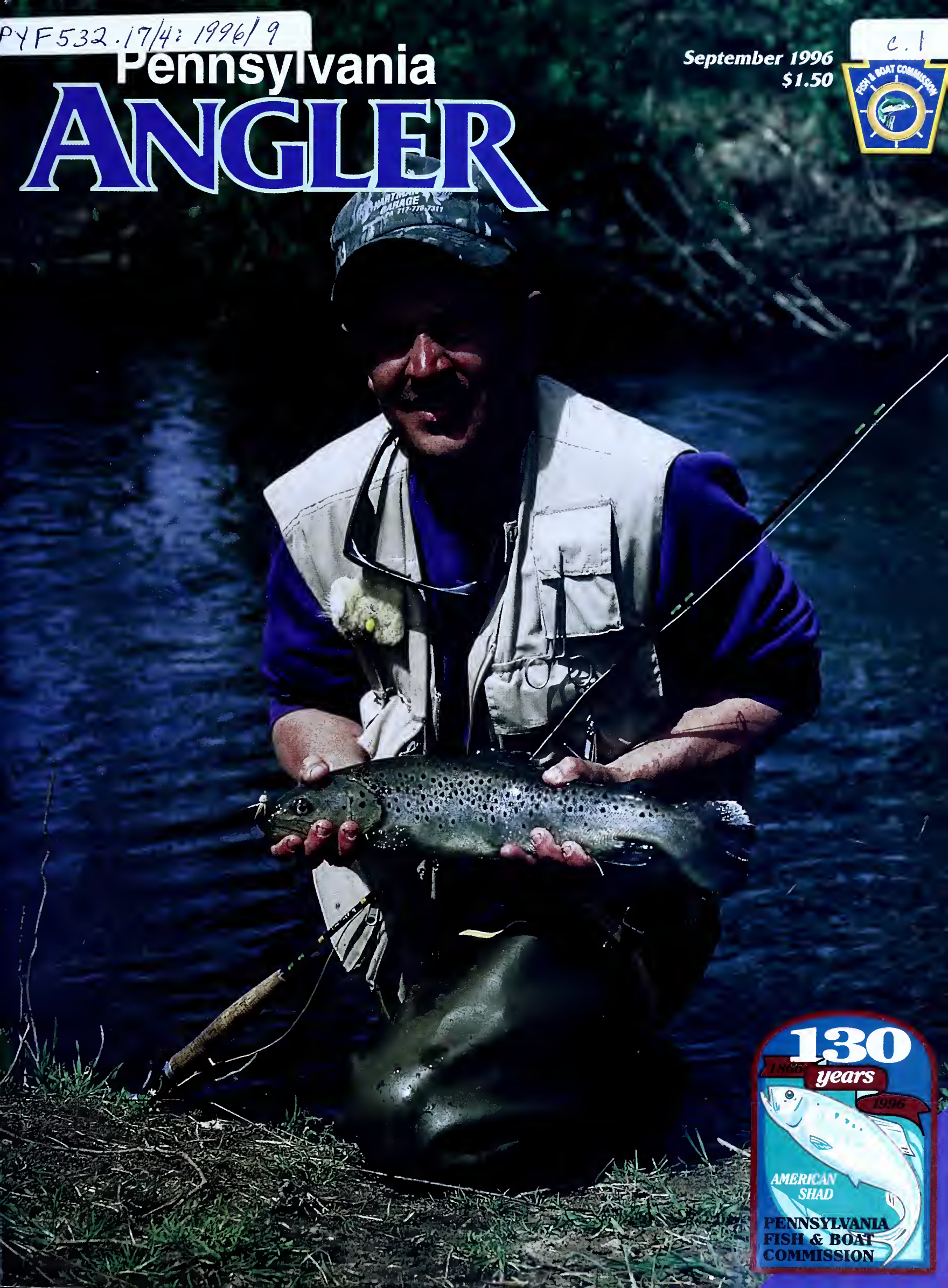
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A Matter of Priorities

One of the most difficult things each of us has to do in our daily lives is to set priorities and stick to them. The Fish and Boat Commission is trying to do a better job at this most difficult task.

The Commission has done an excellent job at identifying its top policy priorities. Our mission statement says it all: The Commission's top statewide priority is to provide fishing and boating opportunities through the protection and management of aquatic resources. We're making good progress in translating this broad mandate into legislative and project-management priorities. However, as they say, the devil is in the details.

In the legislative arena, it was easy to identify the Commission's top priority earlier this legislative session. The Fish Fund needed more revenue. There hadn't been an increase in basic resident fishing license fees since 1983. Fortunately, the sportsmen, the General Assembly and the Administration recognized the need for prompt action, and as a result, a new fee structure is in place this year.

With only a few legislative days remaining in the 1996 session of the General Assembly, the Commission has identified several priority bills that we would like to see enacted into law. A much-needed amendment to the Recreation Use of Land and Water Act (Senate Bill 654) has passed both houses of the General Assembly in slightly different versions. We hope that the House of Representatives concurs with the Senate amendments and sends this bill to Governor Ridge. This legislation will provide liability protections to landowners who allow free public fishing and boating on their lands and waters. Pennsylvania anglers and boaters need to let their voices be heard on this important legislation.

We also hope the General Assembly will pass other priority pieces of legislation during the fall session. These include an update to Pennsylvania's boating-under-the-influence laws; changes to retirement provisions for our waterways conservation officers; a new law on harassment of anglers and boaters; liability coverage for Commission volunteers; and minor changes to the law on regulated fishing lakes.

Even though setting legislative priorities involves policy issues and a cooperative effort with sportsmen, legislators, Administration officials and others outside of the Fish and Boat Commission, setting project priorities is more of an internal task. The Commission has hundreds of facilities ranging from fish culture stations to boat launch ramps throughout the state. We have opportunities to acquire lands and water and to develop facilities for use by the angling and boating public. We are responsible for 67 dams. In an era of limited fiscal and personnel resources, we recognize the need to adopt a more systematic approach to identifying and prioritizing projects that need to be done.

Our more structured project prioritization efforts began when we asked each bureau director to identify uncompleted acquisition, development, construction, alteration, maintenance and repair projects. Our program leaders identified more than 400 such projects statewide. We soon narrowed this list to about 200 projects with a total estimated price tag in excess of \$10 million. I then asked a team of employees to develop criteria to try to identify the top

50 projects for consideration in the next year or two. These criteria include rating the projects' fiscal, safety, mission, cost/benefit, customer-service and core-function effects. After the team identified the top 50 projects for immediate consideration, I met with all the bureau directors and other program leaders to put this list in priority order. We tried to identify those projects that could be completed in the present and next fiscal year. Each bureau director scored each project and the composite list was presented to me for review and consideration.

Now came the hard part. We had 33 construction/acquisition/development projects, arrayed in priority order, and we had to try to find the funding to support them. These projects competed for scarce resources with other worthwhile operational priorities. Do we buy new vehicles for Law Enforcement or put siding on a building at one of the fish culture stations? Do we construct a fishing and boating access area or rehabilitate some wells at our facilities? We had to ask ourselves scores of such tough questions as we tried to allocate funds and staff resources.

Some of you may be wondering why, with the new fishing license fees in place, we can't fund all these worthwhile efforts. There are several reasons. First, the additional revenues from the license increase are primarily devoted to funding our baseline programs and day-to-day operational costs. Second, we are committed to setting aside a portion of these revenues to build up the Fish Fund's unreserved fund balance. We know that costs will increase in the future. We promised the sportsmen and the General Assembly that the \$4 general license increase would last for up to five years. Third, so far, the increased license revenues have not lived up to expectations. We had hoped that the Fish Fund would have had additional revenue of about \$2.5 million the fiscal year that ended on June 30. Instead, our revenues fell approximately \$600,000 short of our expectations. We know from past experience that license sales drop when license fees increase, and we had projected a 7 percent decline in unit sales. However, resident license sales are running about 10 percent behind last year, and sales of non-resident licenses are down by about 25 percent. We hope to make up some of this loss later this year, but the terrible weather this spring, coupled with the decreased sales, mean we had less money for "discretionary" spending than we had hoped. Finally, we are limited in the number of projects we can undertake in a year by the size of our staff and the demands on their time.

When all was said and done, we identified about 25 priority projects that can go forward this year. Now the process begins again with the program leaders identifying projects for consideration in the next fiscal year. Once again we will subject all the projects to the same strict scrutiny as we try to be good stewards of the resources you've entrusted to us while addressing your expectations for topnotch fishing and boating opportunities.

Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

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PA GOVERNMENT PUBLICATIONS

Don't Overlook Lake Wallenpaupack! by Darl Black.....	4
Educators! Get Caught in Our Net!	7
Live-Baiting for Muskies by Mike Bleech.....	8
A Spiraled Isonychia Spinner by Chauncy K. Lively.....	13
Looking Back on Opening Day.....	15
On the Water with Robert L. Petri.....	16
Flying Ants on the Juniata by Vic Attardo.....	17
PA's Best Fall Trout Angling.....	20
Jigging Spoons Know-How by Darl Black.....	21
Why Tag Fish? by Vic Attardo.....	24
PA Fish & Boat Commission Publications List.....	27
Anglers Currents.....	29
Anglers Notebook.....	29
Commission Update.....	30

*Pennsylvania angler Jim Keets shows off a nice brown trout along the Yellow Breeches Creek at Huntsdale, Cumberland County.
Photograph by Art Michaels.*

PLAY Newsletter

In this issue we begin a special series of extras for *Angler* readers. Check out the PLAY newsletter in the middle of this issue. PLAY, Pennsylvania League of Angling Youth, is a Commission educational program specifically designed for young people. PLAY members are encouraged to enjoy the sport of fishing while practicing good outdoor manners, safety and conservation of Pennsylvania's aquatic world.

Do you know a youngster who might benefit from PLAY membership? Please pass along your copy of the *Angler* with the PLAY newsletter to a young angler, or to a young future angler. The PLAY newsletter includes puzzles, games, articles, letters from members and other information geared to teach and entertain a young audience. Published quarterly, it will appear in the *Angler* so that readers and their families not already involved in PLAY have the opportunity to see this material and join PLAY. In addition, seasoned anglers and knowledgeable conservationists can also benefit from reviewing the concise, easy-to-read illustrated items that characterize the PLAY newsletter.

PLAY members receive the PLAY newsletter, mailed directly to their homes. They also receive a membership card, stickers, special publications, a colorful embroidered PLAY patch and other "goodies." Yearly membership in PLAY costs \$3.

Enjoy the PLAY newsletter in this issue, and check out the PLAY membership application in the newsletter. As always, we invite your comments on *Angler* and PLAY newsletter content.—Art Michaels.

PLAY
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Don't Overlook Lake Wallenpaupack!

by Darl Black



Bill Albright shows off a nice Lake Wallenpaupack smallmouth bass. The peak fishing starts at the end of September and continues through October, usually until about the first week of November.

It was almost 20 years ago in the spring during an outdoor writers conference in northeastern Pennsylvania that I first fished Lake Wallenpaupack. The 5,700-acre lake with a shoreline of rock and pine certainly impressed me with its scenic beauty. The fishing on that trip, however, did not.

I'm from northwestern Pennsylvania, so in the spring I was accustomed to fishing dingy water in shallow bays filled with remnants of last year's weed growth. Wallenpaupack was all rock and sand, with very clear water. On that initial outing, I caught one rock bass.

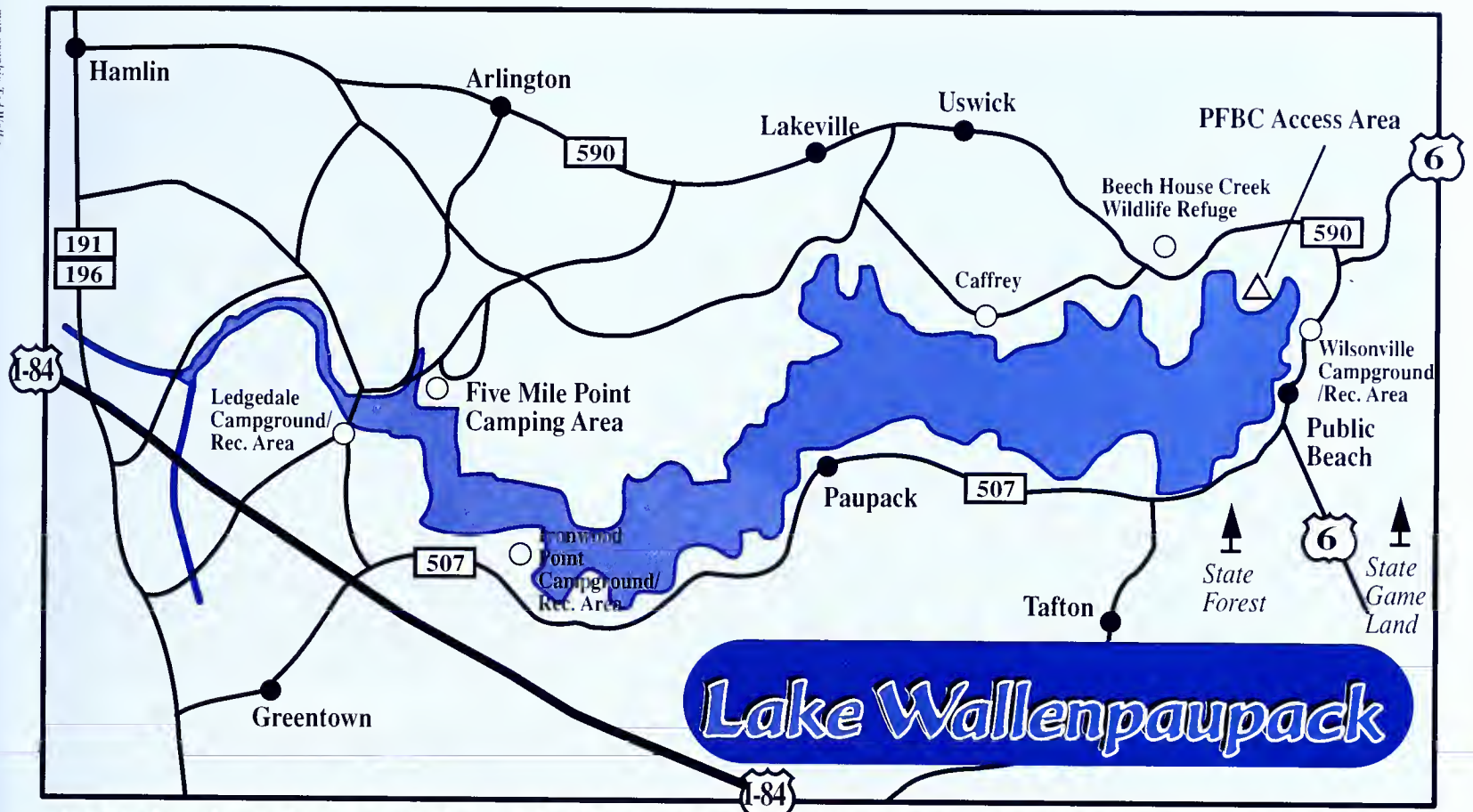
In nearly two decades since that first encounter, I have visited Wallenpaupack many times. On each trip, I gained insight into the lake from local anglers. The result is that my catch rate has gone up and my opinion of the lake has changed. But, then again, the lake has changed, too.

Some 20 years ago Wallenpaupack was not producing trophy striped bass. Nor did it have a reputation for big walleyes. Largemouth bass were scarce as hens' teeth. There have been other changes, too.

A different Wallenpaupack

"The main change at the 'Pack has been the growth of weeds," says Bill Albright, a Lake Wallenpaupack fishing guide who calls the nearby community of Lake Ariel home. "Ten years ago there were only a few scattered weedbeds in certain places. When someone heard a report that bass or crappies were being taken in the weeds, they had to look hard for those few spots. Today, weeds ring the lake, and you have to look hard for shallow-water spots without weeds."

According to Albright, the aquatic vegetation—mainly milfoil—is growing at depths from eight to 12 feet, resulting in an identifiable inside and outside edge of the weedbeds. Anglers speculate the vegetation is rooted on the silt that has washed into the rock-bottom lake over the years. The rich organic matter settles at a depth that is below the draw-down level of the lake, thus creating a distinct inside edge when the reservoir is brought to full pool.



Ed Czarkowski is a long-time angler at Wallenpaupack. He acknowledges the changes, too. "It is an entirely different lake these days. When I was a kid, the lake was clear and rocky. Now, weedbeds stretch for miles. I also notice more algae blooms. Is fishing better today as the result of the weeds? I'm not sure."

But ask Albright if the weeds are good for fishing and you receive a different response. "Fishing is better than ever at Wallenpaupack, and the weeds are the reason why," he says.

Weed Benefit

"The weedbeds provide cover for bass and panfish fry to hide after the spawn," Albright says. "Weedy cover reduces predation, especially on bass fry. Thus, more little fish survive to become adult fish."

The weeds also provide cover for baitfish. With bait in the weedbeds, more gamefish remain shallow through the summer instead of suspending in deep water. Albright says this has made smallmouths more accessible to anglers, as well as contributing to an increase in the largemouth population. The weeds have benefited most warmwater species. The exceptions are stripers and trout, which seek cooler depths in the summer. But Albright and other anglers wonder about the future of the weedbeds.

Lake Wallenpaupack superintendent Dave Lamberton says that the weed growth is the result of nutrients washing into the

lake. He anticipates the nutrient level to increase, and the weeds to continue to grow.

"Anglers sure like the weeds," says Lamberton. "The only complaints I have had are from a few boaters who had problems with weeds clogging motor cooling intakes. I do not see any concern right now with the vegetation. If any action is needed, it would be addressed through our watershed management district."

Popular fish species

According to Albright, the two fish species that draw out-of-town anglers to the lake are trout and stripers. "Fishermen can catch bass anywhere in the state, but tourists are fascinated with those big stripers and big trout. And make no mistake, Wallenpaupack grows them large. The lake record for brown trout is over 17 pounds. The striper record is over 34 pounds."

Czarkowski is a trout fisherman. "My favorite time is as soon as trout season opens," he explains. "There are big trout in very shallow water, sometimes in only a foot of water. The trout are on rocky shoals at the mouths of creeks that are running a tad warmer than the main lake. I use spinning gear with 6- to 10-pound test. Ten-pound test may seem a bit heavy, but remember that these are big trout. My favorite lures are small spoons like a Little Cleo or Krocodile. Other anglers may use spinners or crankbaits."

Even in the cold water of spring, trout

forage in the shallows only until about mid-morning. Then the trout drop back to slightly deeper water until evening. Following a morning of trout fishing, Czarkowski targets crappies. Crappie schools are found in the backs of coves that have feeder streams.

By mid-May, the brown and rainbow trout are leaving the shoreline for deeper water. Through the summer, trolling stickbaits on downriggers takes some trout.

Albright does not guide for trout. He focuses on stripers, walleyes and bass. The peak striper fishing takes place between May and late June. During May, light-lining live alewife takes most of the fish.

"That first full moon in June sees the best striper action at night," confides Albright. "Throw a stickbait on a point or flat where alewife are spawning, retrieve very slowly, and you are going to catch a striper or big walleye. After the striper bite slows in late June, the night-bite for smallmouths picks up."

By July, daytime anglers find it difficult to compete with the extremely heavy pleasure boat traffic on the lake. Czarkowski avoids Wallenpaupack until fall. However, the increase in the largemouth bass population is providing some daytime opportunities for anglers who work the weedbeds.

"The largemouths are doing better, but the population is not as strong as the smallmouths," says Albright. "I can't say an angler going to Wallenpaupack will

Don't Overlook Lake Wallenpaupack!

catch numbers of largemouths. But there are more and more each year. It's noteworthy that the lake record largemouth is around nine pounds, so that tells you about the potential growth in Wallenpaupack."

Fall bonanza

Post-Labor Day signals the start of a new fishing season on Wallenpaupack. Tourists and summer residents are gone, pleasure boat traffic decreases, and anglers return to the lake.

Trout catches pick up as brownies begin a slow migration toward Ledgedale for a winter spawn. Trolling a 3 1/2-inch to 4-inch chrome-side/blue-back stickbait in the deep water of the main creek channel is a productive tactic.

Other anglers begin to search for humpback yellow perch with small jigs and jigging spoons. However, for Albright and Czarkowski the most exciting fall fishing is the smallmouth bass.

"The absolute best time to catch smallmouth at the 'Pack is the fall—it is fabulous fishing for numbers of big bass," says Albright. "The peak fishing starts about the end of September and continues through October, usually until the first week of November. All summer long you wonder where the big smallmouths are holding, but come October they turn up like clockwork on the banks."

This smallmouth pattern was clearly demonstrated to me by Albright on an October outing a couple of years ago. The smallies move to the points and work their way into the coves following baitfish. The bass are literally stuffing themselves with as much food as possible to build up winter reserves. Catching 10 to 30 bass a day from 2 1/2 to 4 1/2 pounds is not uncommon at this time of the year.

Albright has some detailed advice for this fall bite. "Leave the grubs and jigs at home. Don't bother with topwater lures or even jerkbaits. There are only two baits you need—a spinnerbait and a crankbait. Some days the smallies hit only the spinnerbait. Other days only the crankbait works. Have a rod rigged with each to switch back and forth until you figure out which is going to produce best."

Albright likes a half-ounce chartreuse-skirt spinnerbait with gold blades. He prefers the heavier bait because it allows the angler to cast a long distance and "burn" the bait back to the boat, which means retrieving the spinnerbait fast enough so

it wakes the surface without skipping out of the water.

In crankbaits, Czarkowski recommends a crayfish-colored one that runs between 6 and 10 feet. The most popular crankbait on Wallenpaupack is the Bandit in color code 204.

"Move to a point and begin working the bank back into the cover," says Albright. "Keep your boat in 15 to 20 feet of water and throw to the bank. That's all there is to it. The stormier the day, the bigger the bass. It's wild. The bass hit so hard they almost take the rod from your hand!"

As water temperature drops into the 40s around early November, smallmouth fishing slows, but other species take their turn in the shallows. Stripers and muskies become active on the banks again. Both species can be taken on large minnow plugs fished as a jerkbait. Local experts claim the best fishing for muskies is a stormy day in November.

Don't overlook a fishing trip to Wallenpaupack this fall. Armed with this information you're bound to score. **ANGLER**

Stocking Wallenpaupack

According to Commission Area 5 Fisheries Manager Dave Arnold, Wallenpaupack receives annual stockings of the following species: stripers, brown and rainbow trout, walleyes and channel catfish.

"Although hybrid stripers had been stocked at one time in the lake, only pure-breds are used now," says Arnold. "We do not stock muskies, but I know some are caught in the lake each year."

Walleye stockings have taken a new direction. "We were not getting much of a return by stocking walleye fry at Wallenpaupack," says Arnold. "Based on our studies, fry did not seem to make it through the first year—too many things affect them. Large fingerlings were not meeting with much success either, because they were stocked late in the summer and did not winter over very well."

Small fingerling walleyes seemed to be the success secret. "Small fingerlings, three-quarters to a little over one inch, are put out in mid- to late June," Arnold says. "They seem to have enough time to get accustomed to the lake and develop some fat deposits to make it through the winter. We will continue with small fingerling stocking at Wallenpaupack."—DB.



photo-Dan Black

A Pennsylvania Power and Light Lake

Lake Wallenpaupack was built in 1926 to provide a water supply reservoir for electric power generation. The lake is owned and operated by Pennsylvania Power & Light (PP&L).

Over the years the area has developed into one of the major tourist areas in the eastern U.S. Resorts, marinas and private homes surround the lake.

PP&L maintains four campgrounds on the lake, each with a boat launch. The "summer" campground season is from the last Saturday in April to the third Sunday in October, when full services are available. During the rest of the year, campgrounds are open with limited services.

The Fish & Boat Commission's Wallenpaupack Lake Access, just off Route 590 near the dam, is open 24 hours a day, all year long.

According to superintendent Dave Lamberton, the lake water level fluctuates through the year with a number of intended target levels. By June 1, the lake is at full pool of 1,187 feet above sea level. By August 1, PP&L is mandated by the Federal Energy Regulatory Commission to have the pool down to 1,182 feet in preparation for hurricane season. By October 1, the lake is scheduled to be down to 1,179 feet. Then it rises until January 1, only to start back down until it reaches its lowest point of 1,178 on April 1.

For an informational brochure on Lake Wallenpaupack, call the lake superintendent's office at 717-226-3702.—DB.

Educators: Get Caught in our Net—our net full of educational resources!

Public education is one of the tools the Commission uses to accomplish its mission. By working with others involved in youth education, we help you do your job by providing training and educational resources and materials for you and your students. These resources are not only for teachers, but are ideal for anyone working with youth.

Audiovisual Loan Library List

You can borrow films and videotapes from the Commission's Audiovisual Loan Library. Topics include fishing, aquatic animals, conservation and freshwater habitats. Also, boating and water safety topics. Videos are available for preschool to adult viewers.

PLAY for teachers!

Elementary school teachers in grades four through six can receive up to 30 copies of the PLAY newsletter and an instructor guide four times each year. Just write us a letter on your school's letterhead including your name, school, address and the grade or subject you teach.

Educational Aquatic Field Study Permit

With the passage of Pennsylvania Act 1995-47, students age 16 and older are no longer required to hold a Pennsylvania fishing license to participate in a school-sponsored aquatic field study under the direct supervision of a high school or college/university instructor with written permission from the Fish and Boat Commission. When you write, ask for a copy of the application.

Conservation Award Program

To recognize individuals and groups who make significant contributions to improving the environment for the benefit of themselves and others.

Workshops & Training

KARE Teacher Workshops. KARE is an environmental education program on water resources—our streams, lakes, rivers and their aquatic life forms. This program has been approved by the Pennsylvania Department of Education for use in schools. Its use will assist teachers at all levels in meeting the ecology and the environment standards for schools. The program has materials for all age groups. It is targeted for use by schools, but can be easily adapted for camps, clubs, youth groups and adult organizations. Training workshops are offered throughout the state to provide the materials and show how to use them most effectively.

Fishing Skills Instructor Training Workshops

Certified Fishing Skills Instructors are trained by the Fish and Boat Commission in a 10-hour workshop to lead SMART Angler Fishing Skills and Aquatic Education classes. SMART angler clinics can be offered as a full, half-day or week-long program at a park, nature center, club or camp. They include sessions on PA fishes, the places they live, basic fishing skills, safety, and of course, a chance to fish! Anyone can become a Fishing Skills Instructor. You need not have fishing experience. You just need to have a valid PA fishing license. Training

workshops are offered throughout the state or can be set up for your group.

Basic Boating Course

This course was established to supply boaters with practical information so they can make more informed decisions on the water. Course instructors provide students with information to help them reduce the risk of injury and conflict on the water. This course is classroom-only instruction. Courses are offered statewide.

Boating and water safety course

This program is designed for secondary school students to promote boating and water safety education. It involves classroom and practical instruction. Contact the Commission for information on scheduling.

Educational Brochures and Publications

Kids' Pages. Stories and activities on a variety of topics relating to fish, fishing and the outdoors. Fourth grade to adult.

SMART Angler. One page informational sheets on a variety of topics including fish, fishing skills and related subjects. Request a current list of titles.

Boating Handbook. Includes legal requirements, other water activities, operation requirements, navigation, communications, boat operations, safety, rescue and general regulation information. Textbook for PA's **Basic Boating course**. Reprinted yearly.

Fish Identification Cards. Ten different tacklebox-sized identification cards (3" x 5") for various fish families. Junior high to adult.

Fishing: Getting Started. Learn to think like a fish, get to know some popular sport fishes, and become familiar with basic fishing gear. Junior high to adults.

Guidelines in Planning a Float Trip. Outlines leader and participant preparedness, responsibility and equipment.

Ice Safety. Learn about ice thickness and strength, and ice rescue.

Low-Head Dams. How to avoid the dangers of low-head dams during river recreation.

Paddling Safety. Safety equipment and planning your next canoeing adventure.

Pennsylvania Angler magazines (back issues). Colorful and informative magazine, "the Keystone State's Official Fishing and Boating Magazine," highlighting fishing and boating in Pennsylvania. Junior high to adult.

Summary of Fishing Regulations and Laws. Seasons, sizes, creel limits and other information. Reprinted yearly.

Water Skiing in Pennsylvania. Guidelines for having a safe and fun water skiing experience.

Wetlands—Natural and Necessary. Definitions, types, importance and status of wetlands. Junior high to adult.

Where to, How to, When to Catch Them. Factsheet designed to help you catch 12 of Pennsylvania's most popular sport fish. Junior high to adult.

For more information on these resources, contact the Commission's Bureau of Boating and Education, Dept PAANG, P.O. Box 67000, Harrisburg PA 17106-7000.



LIVE-BAITING *for Muskies*

by Mike Bleech



Muskellunge are the undisputed kings of Pennsylvania waterways, the top of the food chain. They will eat 10-pound carp. Some tales about muskies are a bit far-fetched. A summer resident at an Allegheny River campground claimed a musky swam just under his boat, and its tail was still behind the 12-foot boat when its head passed the bow. Then there's the relative of an undertaker who swears that a drowning victim had musky tooth marks on his leg. And just about every good musky water has stories circulating about dog-eating muskies.

All of the stories, true or fantasy, add to the entertainment value of this great gamefish. It has been called the "fish of 10,000 casts" because trying to catch one can be such a terribly frustrating experience. Catching just one good musky can be the highlight of a lifetime of fishing. Most Pennsylvania anglers have never caught a big musky.

Catching muskies with any degree of consistency or predictability is difficult. But catching a musky does not need to be as difficult as its reputation claims. Using a few basic live-baiting techniques, you should be able to tame one of these toothy monsters on a fairly regular basis.

First, though, you should understand some of the realities of this sport. Muskies, as the top of the food chain, can never be terribly abundant. The same small lake that supports tens of thousands of shiners, thousands of panfish and hundreds of bass will probably support only a few dozen muskies.

There are good times to fish for muskies and bad times. Timing is very important, though not very predictable. Generally, musky fishing is better mornings and evenings than during midday. Night fishing can be very good, though it usually is best before 11:00 p.m. and after 4:00 a.m. It is usually better in cool to cold water from October through March, and during May and June than it is during July, August and September. But in no way is musky fishing a waste of time during summer. Heavily overcast, rainy, drizzly days sometimes turn muskies on.

Muskies occasionally go on binges. These binges might occur during the middle of a sunny August day, or during a wicked cold front that shuts down most other fishing, or anytime. It can seem easy at times like these, giving some anglers a false impression of what it is really all about. You really do not learn much about muskies during these binges because muskies will strike almost anything. They will bang their heads into the sides of boats, or beach themselves in pursuit of a meal. At times like these, live bait is a poor choice if you agree that it is more fun to catch fish with artificial lures.

But on average, regardless of the waterway involved, live baiting is an excellent choice for musky action. Here are some live-baiting tactics that can help you become a serious musky angler. Note that all of these tactics keep the bait moving. One of the old musky anglers' tales that has ruined many potential musky anglers is that once a musky is located, you should keep fishing that one spot until the musky strikes. On the contrary, you will have much more success looking for an active musky than you will waiting for one particular musky to get hungry.

Drifting & swimming live bait

Drifting or swimming live bait is a productive way to approach musky fishing in rivers and creeks. There is a lot more to it, though, than merely flipping a live minnow into the water and leaving the current to do the work. Most importantly, you need to know the kinds of places muskies like. These places typically involve mild current, cover and depth.

Timing is important to successful musky fishing. Musky fishing is generally better mornings and evenings. October to March is best.



Muskies are probably easiest to find in rocky rivers like the Juniata or middle Allegheny where there is a lot of current (See Figure 1). Muskies do not like swift current, which appreciably narrows the amount of water that should be fished. Look for them behind things that break the current, such as log jams, bridges and boulders.

In mountain rivers like the Juniata or Susquehanna, look below bedrock outcroppings. Fish below islands where there is a relatively calm area between converging currents. Fish below rock bars and other protrusions from the shoreline. Often feeder streams

LIVE-BAITING for Muskies

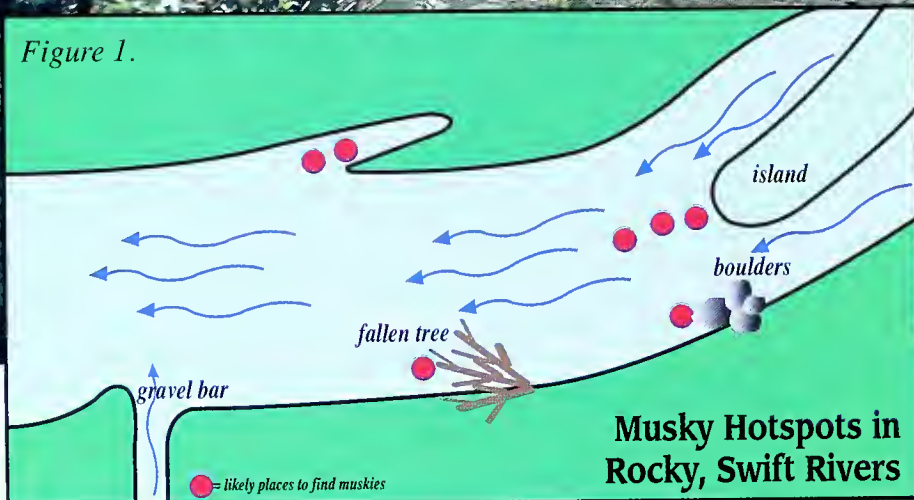
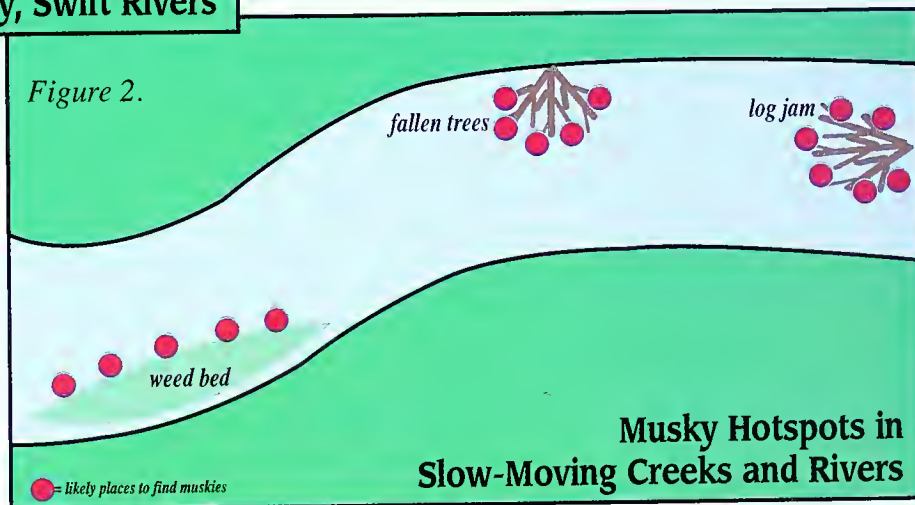


Figure 1. Muskies are easiest to find in rocky rivers like the Juniata or middle Allegheny where there is a lot of current. Look for muskies out of the main current, behind structure that breaks the current, such as log jams, boulders and bridge supports. You'll also find them below islands in the somewhat calmer areas between converging currents. Fish below rocky bars and other obstructions that jut out into the river from the shoreline.



Stonerollers usually remain lively on the hook (upper right), making them good musky bait.

wash out long bars during floods. Anything that creates a calm pocket of water might attract a musky.

In slower, soft-bottom rivers and creeks like French Creek or the upper Allegheny River, long pools can harbor muskies almost anywhere. However, they tend to hold near some sort of cover (See Figure 2). The best cover is generally wood—log jams, leaning trees and such—or weeds. The deep edge of a weed bed is a very likely place to find muskies. River weeds

do not often extend into deep water during normal summer flows, so the best time to fish them is when the river is a bit high.

The best musky water also has “some depth.” This unclear term describes a truly vague situation because depth is a relative term. Water color often has a lot to do with it. At night or in cloudy water, muskies often move into water less than three feet deep. The shallower the water, the more important cover becomes. As a general rule, if you can see the bottom, restrict

your casts to cover. But in deeper water, muskies are more apt to roam anywhere.

The most likely place to find a musky is in calm water with enough depth to hide the bottom, and good cover. You pass a lot of water while float fishing, so you can target cast to the best-looking places, and not bother with anything else. But if you are fishing from shore, or staying in one pool, then you should fish pools more thoroughly. In any case, do not waste too much time in one small area. Keep the bait moving, except for short pauses, maybe a few minutes, in the best-looking places. Strike

a balance between how much water you can fish and how much time you have. Generally, the more water you cover, the better your odds of catching muskies.

Winter is a great time to fish rivers and creeks for muskies, as long as the water is open, because their avoidance of current becomes more pronounced. There is much less musky habitat. The Allegheny River below Kinzua Dam is a particularly good situation because the discharge from the dam is often greater during winter than during summer. This condition pushes most muskies into the few remaining calm pockets along the shore and below islands.

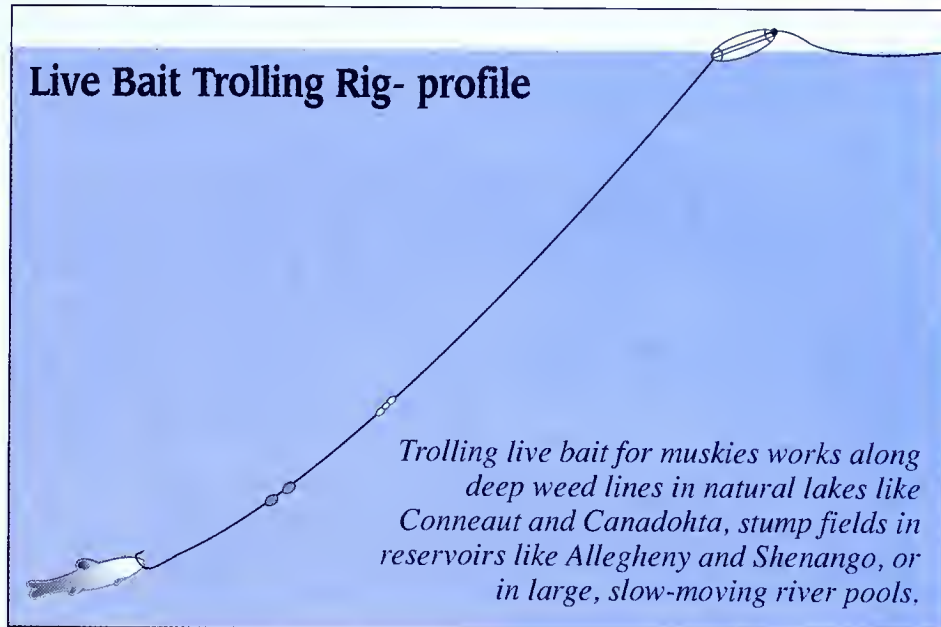
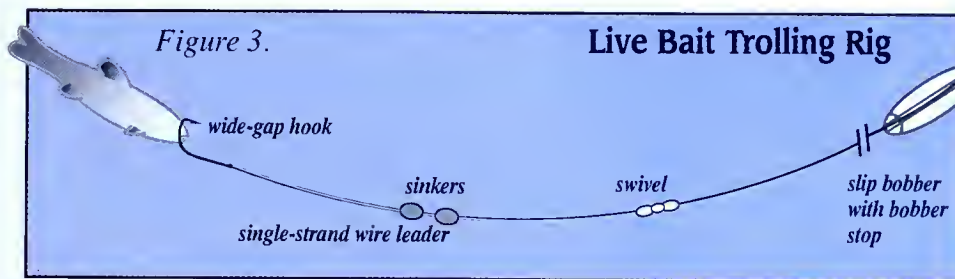
Be flexible when presenting the bait. There is no single set way to do it. Close to cover, or in small pockets of calm water, just flip the bait into place and let it swim. This is usually the best approach during winter. In large pools, let the bait drift with the current.

What about a steel leader? There are so few things that are perfect. Most decisions like these are trade-offs. Sure, steel leaders virtually eliminate cut-offs, but they also reduce hits. Try this without steel leaders. Then after you have had some success, try it with steel leaders. See what you prefer.

Trolling live bait

Anywhere muskies are scattered, trolling live bait can be an effective method. One advantage to this method is that it covers a lot of water. Another is that it gives the bait movement of the same kind that artificial lures use to trigger strikes, though not with as much speed.

Trolling live bait for muskies was perfected during World War II, when musky anglers could not get gas for their boat motors. What many of them learned is that rowing is more effective than motor trolling. Rowing gives the bait a speed-up, slow-down, rise-and-fall motion that really turns muskies on.



This can be nearly duplicated with an electric trolling motor. But for some reason rowing seems more productive.

Trolling live bait is well-suited to fishing deep weed lines in natural lakes like Conneaut or Canadohta, stump flats in reservoirs such as Allegheny or Shenango, or large, very slow-moving river pools.

Try to troll accurately. That is, on well-defined cover such as a weed line, keep the bait close to the weed line. If you do not pull through a weed occasionally, then you are probably not trolling close enough to the weed line.

Rigging a bait for trolling is more complicated than drifting or swimming the bait. It involves the same wide gap hook, plus a wire leader, sinkers, and

a float (See Figure 3). Tie the hook to the end of a wire leader three feet in length. A single-strand, un-coated leader is best because it is not as bulky as are more common braided, plastic-coated leaders. Attach a torpedo-shaped float to the line. A slip bobber is best because the bait may be 10 feet or more beneath the float. Add the sinkers to the wire leader about two feet above the hook. The torpedo-shaped pinch-on or rubber-core sinkers work well.

Depth control is more important when trolling bait than it is while drifting or swimming bait because it is generally done in deeper water. Since the constant movement makes the bait rise, it is necessary to use more weight than you would use when swimming or drifting bait. It might take an ounce of weight or more to keep the bait close to the bottom. Even still, it will rise when the oars are stroked, and drop between strokes, which is desirable.

Rigging minnows for drifting or swimming is as easy as rigging gets. Just tie a hook to the end of the line (See Figure 4). Use a wide gap hook to reduce the chance of the point becoming embedded in the minnow instead of a musky. Be sure the hook is very sharp. Hook the minnow through both lips, inserting from the bottom.

If you want to get the bait closer to the bottom, add a splitshot. Muskies strike upward, so there is seldom any need to get the bait right on the bottom.

Depending mostly on the kind of bait you use, you might want to use a float. Suckers, one of the most common natural foods for muskies, and stonerollers will struggle to get to the bottom. A float keeps them off the bottom and struggling, which is a good situation. Common shiners and chubs are more inclined to stay above the bottom, so a float is seldom necessary. Exceptions might be when you want to keep the bait above snags, or for some other reason at one precise depth.

If you troll just one bait, set the float so that the bait is within a foot of the bottom when it hangs straight down. This keeps it from constantly snagging. If you troll a second bait, set it higher, at least three feet above the other bait, for suspended muskies. Muskies are not always bottom-huggers. Look at the way a musky's eyes are set. They are designed to strike upward. They are much more likely to rise a few feet to take a bait than to attack downward.

When to set the hook while either trolling, drifting or swimming bait is a source of confusion for even experienced musky anglers. There really is no single "right way" to do it. Some anglers reason that a musky probably gets the bait completely in its mouth on the initial attack, so they set the hook as soon as a musky starts moving with the bait. Other anglers prefer to wait until the musky swallows the bait.



The problem with waiting is that this increases the likelihood that the hook will do fatal damage to the musky. Most serious musky anglers realize that the only way to have good musky fishing is to release almost all of the muskies they catch. It takes several years to grow big muskies.

If you fish without a steel leader, the last thing you want is for a musky to swallow the bait. Fishing line will soon break when it is rubbed across a musky's sharp teeth. Without a steel leader, you want to hook the musky in its lips, so set the hook quickly.

Yes, you will miss a few muskies by setting the hook quickly. But probably no more often than if you let the musky carry the bait long enough to swallow it. Quite often the musky will feel something it does not like and reject the bait.

Rigging Bait for Swimming/Drifting

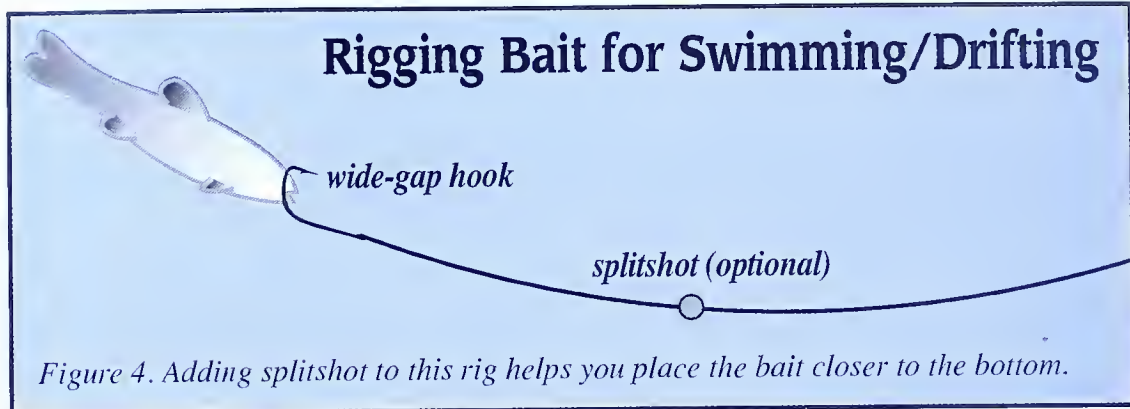


Figure 4. Adding splitshot to this rig helps you place the bait closer to the bottom.

One step some musky anglers use to help set the bait quickly is a "quick strike" rig (See Figure 5). This consists of two hooks. One is inserted through the bait's lips. The other is inserted between the tail and dorsal fin. This way, almost certainly the musky will have at least one hook in its mouth when it first grabs the bait.

But the more junk you get on the line, the more unnatural the rig looks, and the fewer takers you can expect. Consider water color when you rig up. Keep the rigs cleaner—less junk—in clear water. Feel free to use more rigging in cloudy water. Muskies, by the way, can feed very efficiently in muddy water. In fact, musky fishing often gets hot when the water gets some color.

Quick Strike Rig

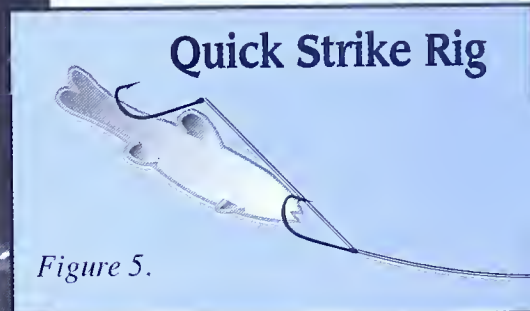


Figure 5.

Anglers net a 24-pound musky in the Allegheny River. Night fishing can be productive, but the author suggests trying it before 11 p.m. or after 4 a.m. for the best action.

Special tackle?

Do you need special tackle for musky fishing, other than larger hooks? Not necessarily. Most anglers do get specialized equipment when they get serious about musky fishing. Yet some very successful musky anglers use the same rods, reels and line they use for walleyes or bass. With live bait you do not need the special rod you would use to cast heavy artificial lures for muskies.

A reel with a bait clicker can be a big help. This allows the musky to strip line off the reel without causing any tangles. And the clicker alerts you to what is happening, should you be daydreaming.

Live baiting is an excellent way for most anglers to get into musky fishing. The investment in time and money is minimal. No, it is not always the most effective way to fish for muskies. However, it is virtually always a good way.

ANGLER

A Spiraled Isonychia Spinner

by Chauncy K. Lively photos by the author

The several species of *Isonychia* that inhabit trout streams of the northeast and midwest are extremely important to the fly fisher. They are relatively large mayflies, not as big as the Green Drake, perhaps, but with enough weight to bring large trout to the surface. The different species in our streams are sufficiently alike in appearance to justify a single pattern each for nymph, dun and spinner. That's a real time-saver.

The diverse hatches of *Isonychia* occur over a substantial portion of the season—not continuously, but distributed two weeks here and a week there, with gaps between. I've encountered sizable hatches on Penn's Creek as early as May and on Little Sandy Creek in Venango County as late as the waning days of September. That's sufficient justification to carry *Isonychia* patterns all season long.

Typically, the duns have dark, slate-colored wings and grayish bodies that in some species may appear nearly black when freshly emerged. Spinners have characteristically clear wings and reddish-brown bodies. Both the duns and spinners may be difficult to see on the water in subdued light. Flush-floating spent spinners are particularly adept at hiding in the film. Add to this difficulty the usual selectivity trout show when taking the spinners, and you have all the ingredients for some mighty interesting fishing.

During those times when I know the *Isonychia* have been hatching, I no longer try to see the low-profile spinners on the water. Instead, if the trout begin to rise to something I can't see, I look upward. The swarms of big spinners, with their distinctive forked tails, are more easily seen silhouetted against the sky. If I see them overhead I assume the trout are taking those already waterborne. However, the spinners do not always assemble over the same riffles every evening. Even so, if the water is not overly turbulent, the spinners may float a fair distance downstream before they become sodden. Thus, they may provide a rise of trout considerably downstream from the site of their entry to the water.

On a warm June evening several years ago I was fishing a favorite stretch of water when the trout began to rise noisily. The *Isonychia* had begun hatching a few days beforehand but on this particular evening



I had seen neither a dun nor a spinner on the water or in the air. Still, the trout were rising to *something* all around me.

Thinking the activity may have been triggered by emergent nymphs, I bent on an emerger and began casting to the risers. One by one they ignored me. By this time a big trout was coming up in crashing rises about 30 feet away, directly opposite me. After each rise air bubbles would stream upward from the bottom. It was very impressive. Then I began the change game and one by one, several *Isonychia* dun patterns were tried, and one by one they were routinely refused.

Another angler came into view and he waded over to chat. I invited him to try for the big fish and he made a dozen or so casts without result. Then he worked his way downstream and I pondered about the object of my frustration out there in midstream. Rummaging through my fly box, I came across a new burnt-wing, bottom-parachute dun I hadn't yet used. I tied it on, cast it over the big riser and as it bobbed along with the current I was struck by its realistic appearance on the water. Obviously, the trout didn't share my view.

This was humbling. In fact, it was downright humiliating.

Sadly, after a few casts I removed the fly and hooked it into the foam in my box. In the adjacent stall was an extended-body *Isonychia* spinner pattern with flat spent wings. Without much enthusiasm I knotted it to my leader and made my cast, thinking at the time that I should stop wasting my time and move on to other trout. But my musing was interrupted by a loud splash in front of me.

I reacted and a brown trout flung its full 20-inch length out of the water. It made a reel-buzzing run to a whirling eddy next to the opposite bank, and for the next few minutes we had an honest-to-goodness street brawl. It was the kind of tussle everyone likes to finish the day with because it gives the angler a warm glow to carry home. It sure beats carrying home a dead trout.

As its name suggests, our Spiraled *Isonychia* Spinner uses a hackle wound with a spirator on 6x monofilament and shaped as spent wings. Please refer to our spiraling instructions in last month's *Angler*.

The flexible extended body is dressed on a needle with a strip of Fly Foam over a deer hair spine and counterwound with ribbing thread. Actually, the pattern's dressing is modular because its main

A Spiraled Isonychia Spinner

components are constructed independently before they are finally joined to the hook.

This pattern is fun to tie because it veers away from the beaten path and offers relief to the sometime boredom of everyday tying. It's durable, too, and with its foam body it is an excellent floater. And not so incidentally, it has worked wonders for me when the trout are taking real spinners.

ANGLER

Dressing: Spiraled Isonychia Spinner

Hook: Size 14 Tiemco TMC 5210 or equivalent.

Thread: Brown 6/0 prewaxed.

Body support: Size 7 sewing needle.

Body spine: Sparse bunch of deer body hair (about 20).

Tails: 4 white microfibetts.

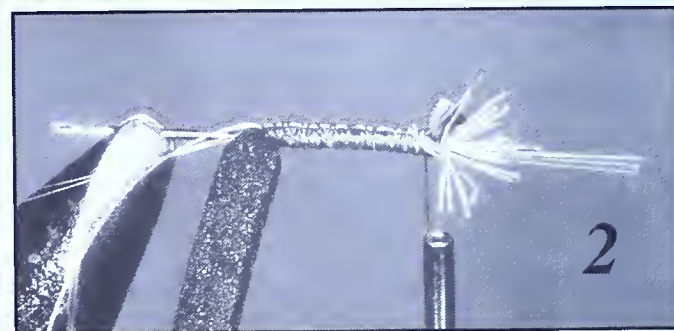
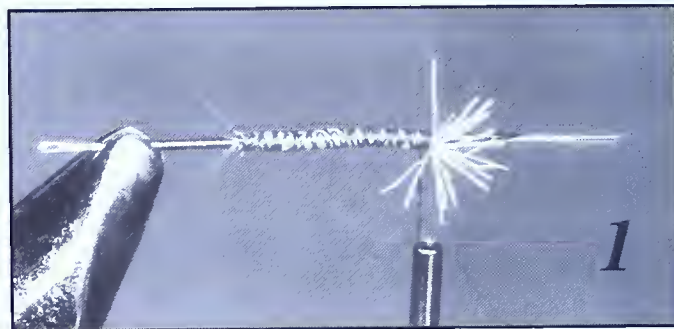
Body: Strip of reddish-brown Fly Foam 1/16-inch thick, 1/8-inch wide.

Ribbing: Yellow size A nylon flat thread.

Wings: Medium dun hackle (preferably saddle) with barbs slightly longer than overall hook length, spiraled on 6x monofil.

Thorax: Dubbing of brown natural or synthetic fur.

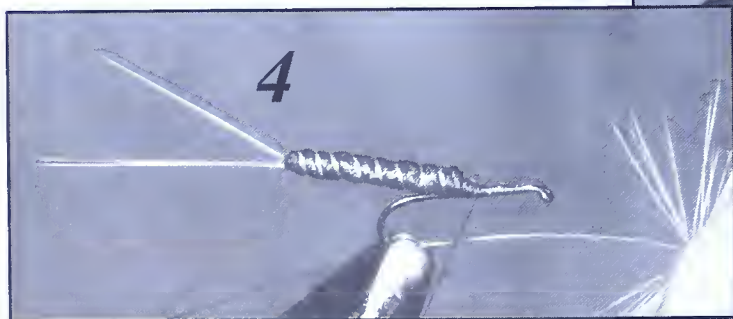
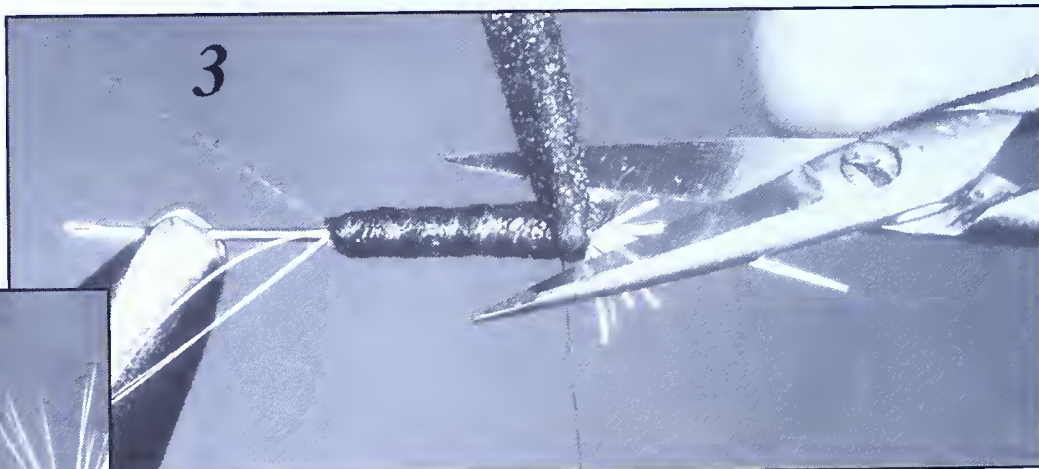
1. Clamp the needle's eyed end in the vise. Hold the deer hair lengthwise over the needle and tie in the thread over the hair and needle (not on the bare needle) with four turns. Then wrap over hair and needle toward the eye for a length of 11mm (about 7/16-inch). Trim off excess hair beyond 11mm. Tie in microfibetts as tails and split into two pairs by winding between. Wrap over microfibett butts to the original tie-in.



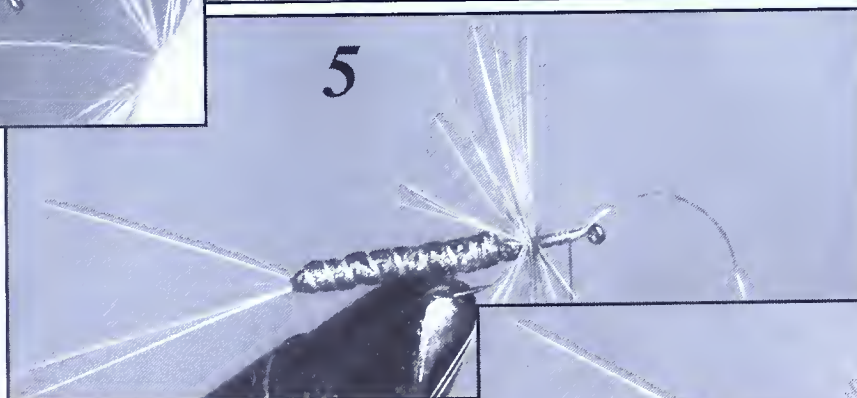
2. Hold foam strip and ribbing lengthwise over the spine and tie in both in front. Then wrap over both in spaced turns to the base of the tails. Allow the long ends of foam and ribbing to hang free and wind the thread to the original tie-in.

3. Wrap the foam strip forward in lapping turns and tie off in front. Trim excess. Then wrap the ribbing counterclockwise in tight, spaced turns. Tie off and trim the excess. Then whip-finish at the body's fore end and cut off the thread. Slide the finished body off the needle and lay it aside. Remove the needle and clamp an 8-inch strand of 6x monofil in the vise. Select a hackle for the wings and spiralate it according to the instructions.

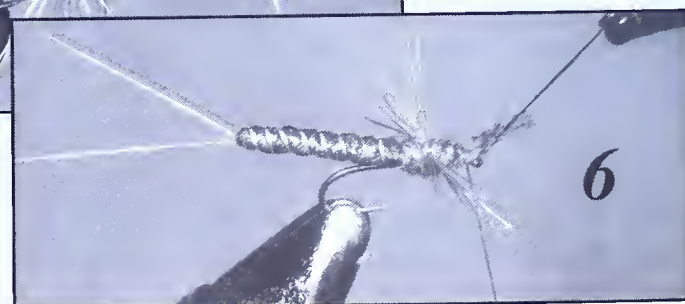
4. Clamp a hook in the vise and tie in the thread at mid-shank. Tie in the body and apply cement to the winds. Then separate the spiraled hackle into two halves and roll between fingertips, as shown. Then press the rolled hackle flat at its center.



5. Position the wing unit over the thorax, as shown, and bind down the monofil both in front and behind the wings. Trim the excess monofil ends and apply Flexament to the winds.



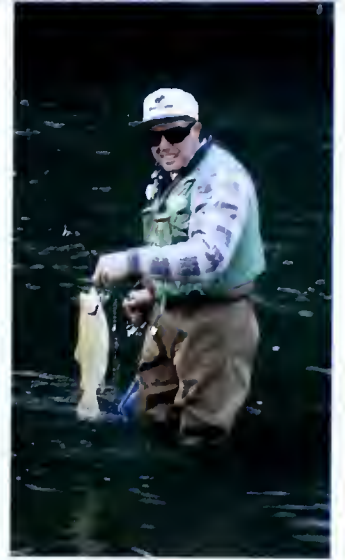
6. Wax the thread near the hook and apply the dubbing to build up a thorax by winding behind, in front of and in criss-cross turns between the wings. Whip-finish behind the eye and apply a drop of Flexament.



LOOKING BACK

on Opening Day *photos by Dan Martin*

Remember Opening Day last spring, April 13? Heavy rain and cold temperatures greeted anglers in the Northcentral and Northeast regions. The Southcentral and Southeast regions had good weather with mild temperatures, and the Northwest and Southwest regions enjoyed dry weather and normal spring temperatures.



Here is a sampling of Opening Day fun on the Yellow Breeches Creek, Cumberland County.

If you're looking ahead to fall trout fishing and where the best fall stocked trout action will be, see page 20.

ANGLER



On the Water

with Robert L. Petri

The Log

I always knew it looked like a good place to hold a big fish. It was just impossible to put a line into. So I always passed it by on my frequent trips to the McKean County freestone stream on the edge of the Allegheny National Forest. Oh, sometimes I would make a half-hearted attempt to get behind the big log that lay tight against the undercut bank. But it was always more wishful thinking than serious effort. From the upstream side, a set of low hemlock branches rode only inches above the surface of the water. Couldn't get a cast under them. On its downstream side, several long branches rode out to cover most of what would have otherwise been open water. Whatever lived there was safe from me, and I was usually content to let the matter stand that way. That is, until I saw what lived there.

One day, I was passing by the impossible log, working my way upstream. As usual, I looked and just shook my head. You can't get there from here, I thought. I kept on moving, wading slowly, watching the next pool for fish.

Then suddenly behind me, *splooooosh!* The noise was like someone dropping a compact car in the stream. I turned and watched the water in front of the log boil and fly in all directions. A shower of minnows erupted in front of a massive wake and an ominous yellow-brown shadow that looked to be at least four feet long. You know how the filtered light in the woods can distort things.

The pool suddenly went silent and so did I. I stood and considered for a moment. I walked

back and stood a good distance away from the pool, trying to spot the fish. This had my interest. I began to look at ways to do the impossible.

My first attempt was not real reasoned out. I knotted a big Woolly Bugger to the end of my leader, and approached the pool from the downstream side. There was an eight-inch wide gap between the back side of the log and the bank. It was deep over there, and even on tip toes, I could feel cold water trickling in over the tops of my hipers. Never mind, though. Many times over the years, I'd gotten wet feet for far less worthy reasons. There was a big fish here.

I dumped the Bugger into the gap and let it sink. Holding the rod tip high, I let the fly bounce down the narrow slot and hopefully into the waiting jaws of the big trout.

The line stopped. A charge of electricity raced up my spine. I hauled back and drove the hook home into about half a ton of Pennsylvania hardwood. Scratch one Bugger. I waded out and sat on the bank to let a decent interval pass, and then tied

another Bugger on and crossed the stream to try and get at the log from the far side. This went about as well as my first bright idea. I tried to drape the fly over the log and let it sink tight against the trout's home. But it never got there. An errant twig caught the tippet just as it was rolling over, and the fly wrapped itself around and around and around it. There it hung, high, dry and useless.

It was two weeks before I could get back to the log and the big trout. The late May morning was cool and the ground was damp in the aftermath of a moderate overnight rain. The rain had taken just the edge off the sparkle and clarity of the flow. Good day for a big fish. I found the pool with the impossible log and once again faced the puzzle.

I eased out into the water just downstream from the log and stood still for a moment. Another Bugger was attached to the tippet, this time with a small splitshot crimped just in front of it. I swung the rod tip back and forth, looking for an opening in the criss-cross mess to drop my fly through.

I have no idea how I did it, but when I dropped the fly, it fell perfectly into a small open slot along the upper portion of the log and sunk immediately. I was just beginning to congratulate myself on this act of skill, luck or divine intervention when the line stopped dead again. I muttered a few ill-chosen words, fully expecting to be attached to yet another immovable chunk of timber. But when I

lifted the rod, it throbbed with the power of a serious fish.

The next few moments aren't real clear in my memory. I backed out of the water, and more or less set about trying to crowbar the trout out. No fancy stuff. I stood on the bank and put the pressure on. He bucked and ran. I kept the rod high. We went back and forth for a few minutes. Then I could feel him weaken. Maybe I had dragged his head into a limb and rendered him senseless. I don't know. There were enough limbs around, that's for sure.

Finally, I waded into the pool and extracted him from the jungle he called home. He wasn't four foot long after all. More like 17 inches or so. I let him fin gently in the shallows until he regained strength, and then I turned him loose. I have this notion he gave me a parting look that said: "What a rotten, miserable thing to do. I was in an impossible place, and this wasn't supposed to happen." That's OK. I will likely trouble him no longer. It's enough to know that he is there, and that just once, I beat him on *his* field. That's all I really wanted.





PLAY

Pennsylvania • League • of • Angling • Youth
SUMMER 1996

How do they do that? How do fish



A fish doesn't have ears like you do. What looks like its ears are really its gills. Gills are used for breathing, not hearing. So how does a fish hear?

A fish has ears *inside* its head. When sound reaches the fish's head, the inside of the ear vibrates. Inside its ear are little bony stones called **otoliths** (O-ta-liths). The otoliths vibrate. Around the otoliths are very small hairs. These hairs feel the otoliths moving. The hairs send messages to the brain.

Sound is like a secret message in code. The otoliths break the code. The hairs send the decoded message to the brain. A fish's ear is like a detective.

It breaks the code and lets the brain know what it is hearing.

Most sounds that a fish hears are the sounds that other fish make. Fish use low sounds to "talk" to one another. These low sounds are picked up very well by other fish. But fish can't hear most of the sounds that people can hear.

Have you wondered why you shouldn't talk loudly when you are trying to catch a fish? Or why you should sit still when fishing from a boat? What about tapping on the side of a fish bowl? Now that you know fish can hear, you know that they can hear your yelling. They can hear your feet on the bottom of the boat. They can also hear the noise when you tap on the side of a fish bowl.

Remember this the next time you are fishing—or visiting an aquarium!

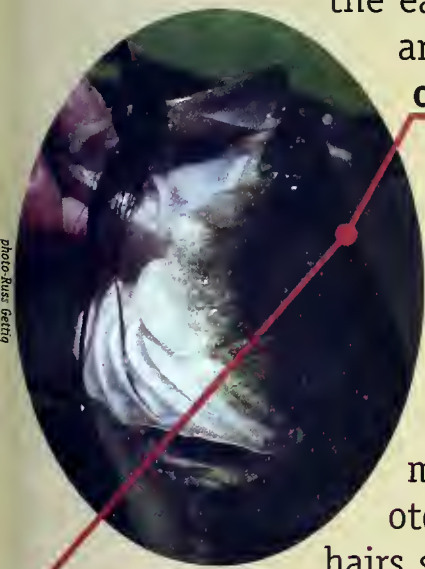
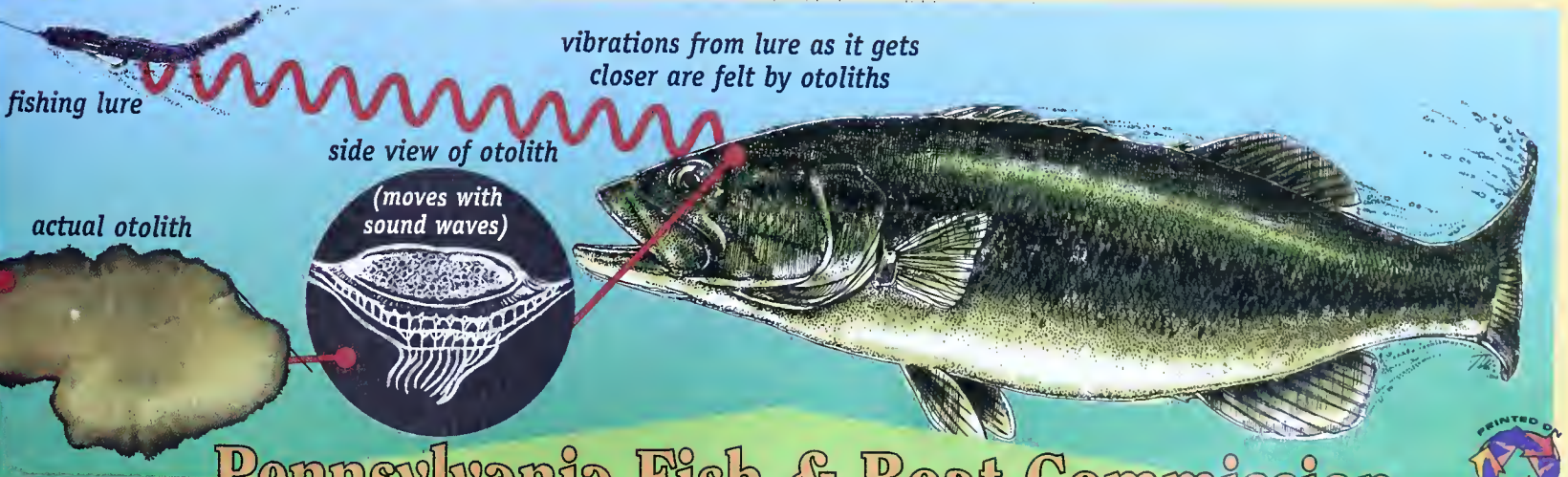


Photo: Rusty Gertig



Pennsylvania Fish & Boat Commission





TACKLEBOX

Do you have a favorite fishing story? Or some pointers for other anglers? Send them to the Tacklebox and we'll share them with other PLAY readers!

DEAR PLAY:

If you have a fish in a fish bowl without a bubbler, how come air doesn't mix with water by itself?

—Jessica Pest, Washington

Dear Jessica,

That's a good question! Air, or oxygen, mixes with water in different amounts. When water flows over rocks or waterfalls, lots of air gets mixed in. When the water is still, only a little air mixes in. Some fish need more oxygen than the amount that is dissolved when the water is still. That's why we put bubblers, or aerators, in fish bowls. The bubbler in a fish bowl forces air bubbles up through the water. Some of the air in those bubbles gets mixed in the water so the fish can breathe. Bubblers not only make neat sounds, but they are very important for fish to live!

DEAR PLAY:

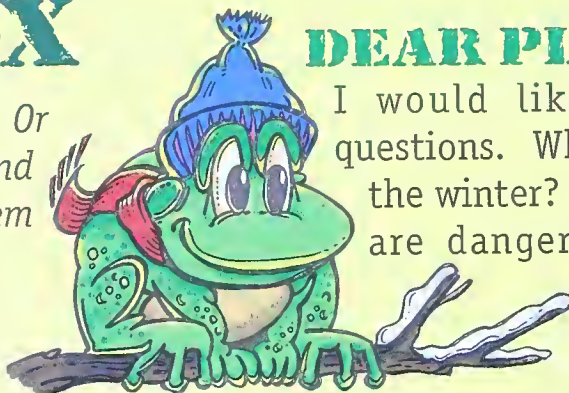
I like your goodies that come in your membership pack. I especially like the patches. I've been getting this package since 1988. Your newsletter is very informative. I like learning about feeding habits and families of fish. I hope to see more packets and newsletters.

P.S. I've been fishing since I was two and I am now 13.

—A member of PLAY,
Rick Mummert Jr., Hanover



Dear Rick,
Thanks for that nice letter! We are glad that you enjoy each issue of PLAY. We have some exciting PLAY patches coming out in the future, so look out! It's nice to hear from a long-standing member. Stay in touch!



DEAR PLAY:

I would like to ask a few questions. Where do frogs go in the winter? What kinds of fish are dangerous? Do snakes

hibernate?

Thank you!

—Your friend,
Johanna Smith

Dear Johanna,

Wow, what good questions! Some frogs spend the winter under logs or loose bark on the forest floor. Some frogs burrow into the sand and mud at the bottom of a pond. If you don't see frogs in the wintertime, you know that they didn't go away. They are just well-hidden! You may know of some fish that live in the ocean that are dangerous to people. But there are no fish in Pennsylvania that we can call dangerous. Some fish, like the catfish and sunfish, can be hard to handle because of the sharp spines on their backs and sides. Yes, snakes do hibernate. Some burrow deep into the ground when the weather gets cold. Some snakes have dens on rocky hillsides. Many times, different kinds of snakes share the same den together!

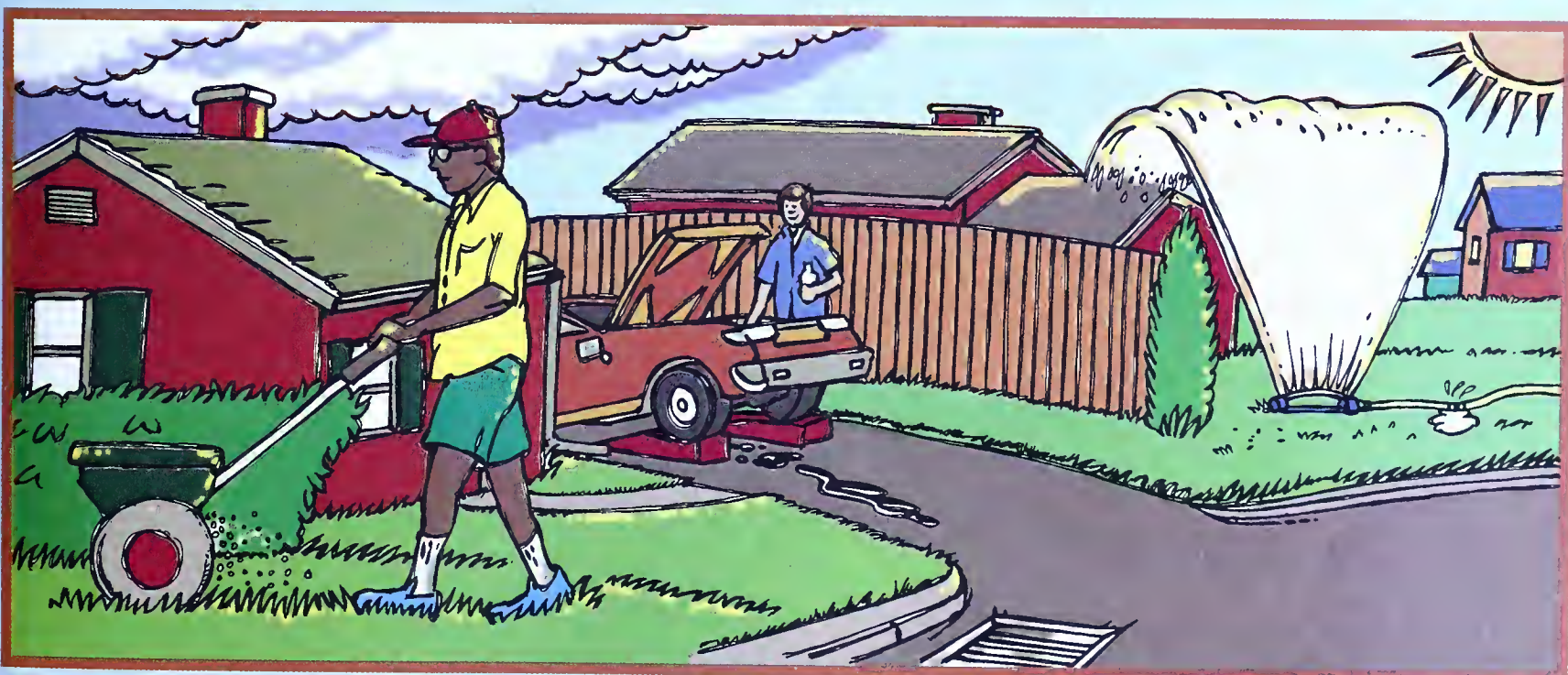


Adam Carloni
(age 9) of
Myerstown sent
us this picture
of a lunker
largemouth
bass that he
caught.
Another proud
PLAY member!

Summertime DO'S and DON'TS

How many times have you heard that clean water is important? How about water conservation during the summer months? Each of us has a responsibility to do all we can to conserve and protect water. Remember, somebody does live downstream. That "somebody" might be the fish you like to catch.

Below is a typical summertime scene, in a neighborhood maybe like yours. The people in these scenes are not being responsible water users. They may not be conserving water. They might be doing things that reduce the quality of nearby water. See how many summertime don'ts you can find.



Answers: DON'TS: watering during the middle of the day, draining oil on the ground, oil leaking from boat motor in water, leaky hose, fertilizing grass before rain, cutting down vegetation on bank, and littering.

Let's Help Harmon!

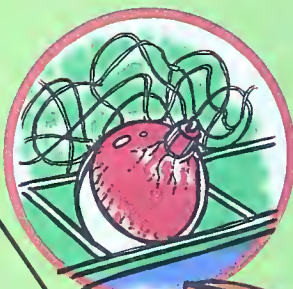
Harmon D. Water got out of bed on the wrong side this morning. He's feeling a bit cranky and out of sorts.

Harmon has been fishing before, but he's

having a tough time today following the rules and remembering the right way to do things.

It's up to you to help Harmon mend his miserable manners. Look at the picture and find all the things that are illegal or could be problems if Harmon doesn't fix them.

Make sure you find all seven problems, or Harmon won't be able to fish again!

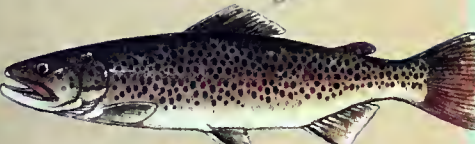


(The seven problems are: more than two lines in the water, use of barbed hooks in this area, keeping fish in a catch and release area, old line, old bobbers, soda can garbage, potato chip bag litter.)

the Pennsylvania Fish Facts game

How much do you know about the fish of the Keystone State?

Pick the fish from the list on the left that best fits each fact on the right.



American eel

American shad

Bluegill

Brook trout

Brown trout

Bullhead

Burbot

Carp

Channel catfish

Chinook salmon

Coho salmon

Crappie

Flathead catfish

Kokanee salmon

Lake trout

Longnose gar

Muskellunge

Northern pike

Golden trout

Pickereel

Smallmouth bass

Striped bass

Walleye

White sucker

White perch

1. Largest member of the Minnow Family.
2. The state's biggest catfish, found mostly in Western Pennsylvania.
3. Largest member of the Perch Family.
4. First trout brought to United States from Europe.
5. Chain-like markings along its sides.
6. Member of Pike Family with bean-like spots along its sides.
7. Trout with the "Midas" touch.
8. A popular farm pond panfish.
9. Of 16 kinds in North America, it's the only one found in Pennsylvania.
10. Largest member of the Salmon Family found in Pennsylvania.
11. In some states, it's called a "rockfish."
12. Mostly a stream fish, it's one of the largest members of the Sunfish Family.
13. Largest member of the Pike Family found in Pennsylvania.
14. One of the smaller members of the Catfish Family.
15. Comes in two varieties—black and white.
16. The smallest of the true basses found in Pennsylvania.
17. This member of the Catfish Family has a deeply forked tail.
18. The largest member of the Herring Family found in Pennsylvania.
19. A freshwater form of the sockeye or red salmon.
20. A very bony fish, sought by anglers in many streams in spring.
21. Pennsylvania's official state fish.
22. Our biggest, but least caught trout.
23. Nicknamed "silver salmon."
24. Probably the oldest of the living fishes.
25. This fish is a freshwater cod.

PERSONAL WATERCRAFT

FUN

Personal watercraft (PWC) are the fastest growing watersport in Pennsylvania. These boats are very fast and powered by jet drives. They are sometimes called "water scooters" or "jet bikes." They come in many sizes and shapes. Some are built for single riders. Others are made for two or more people. They can be

operated in a sitting, standing or kneeling position.

Operating a personal watercraft is a thrilling experience. It is a safe sport if precautions are taken. How many safety rules do you know? Answer the questions below. Then circle the word in the word search.

Personal Watercraft Safety WORD SEARCH

- 1 _____ on board must wear a personal flotation device (PFD).
- 2 It is illegal to operate a personal watercraft at _____.
- 3 Operators of personal watercraft must obey the same rules as other _____ boats.
- 4 Anyone 11 years old or younger may _____ a personal watercraft if at least one person 16 years or older is on the boat.
- 5 It is illegal to tow a water skier behind a personal watercraft that carries _____ people or fewer.

- 6 In case of a _____, the personal watercraft must have a fire extinguisher on board.
- 7 Anyone 12 to 15 years old may operate a personal watercraft without having another person in the boat 16 years or older if he or she obtains a boating _____ certificate.
- 8 A mechanical sound-producing device such as a horn or _____ must be carried on board a personal watercraft.
- 9 When supplied with the boat, a safety cord for the _____ switch must be attached to the body, clothing or personal watercraft.
- 10 A dangerous activity that is done too often by personal watercraft operators is wake-_____.

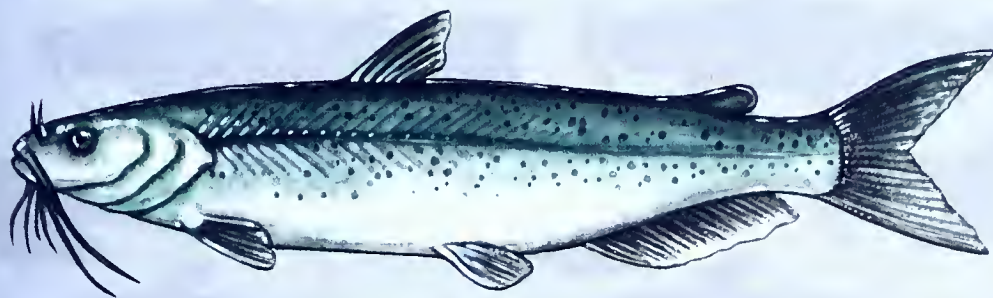
C	S	M	T	U	M	M	O	R	S	B	S	A	B
A	M	O	P	E	R	A	T	E	C	D	A	V	N
S	A	T	Q	O	Y	U	T	A	B	G	F	P	O
D	B	O	R	L	K	G	M	O	P	R	E	O	P
F	L	R	U	K	E	B	F	Q	W	T	T	Y	P
N	O	U	Y	J	H	G	B	V	W	K	Y	Y	E
I	O	H	K	K	L	T	R	E	H	L	L	J	O
G	P	S	I	D	A	T	F	F	I	R	E	U	P
H	A	U	L	O	P	L	M	H	S	R	A	M	Z
T	W	O	L	L	T	R	E	C	T	O	P	P	K
Q	U	N	T	Y	U	O	P	X	L	O	R	I	B
R	E	V	E	R	Y	O	N	E	E	T	N	N	W
W	Y	V	D	A	K	L	L	O	S	R	Y	G	K

THE CATFISHES

What is it that all catfish have in common? You guessed it if you answered *whiskers*! These whiskers are known as **barbels**. They are not poisonous, but they are used to locate food. Catfish also have a spiny ray in the dorsal fin, a sharp spine in each pectoral fin, and no scales on their bodies. Like trout, catfish have an adipose fin.

Catfish can be found through most of the state. Try fishing in a variety of places, from clear, deep rivers to muddy ponds and lakes. They bite on just about anything from chicken and beef livers to spinners and jigs. Fishing should be especially hot at night in early to mid-June. Catfish season is open year-round with no minimum size.

Here are some paintings and descriptions to help you identify your next catfish catch.

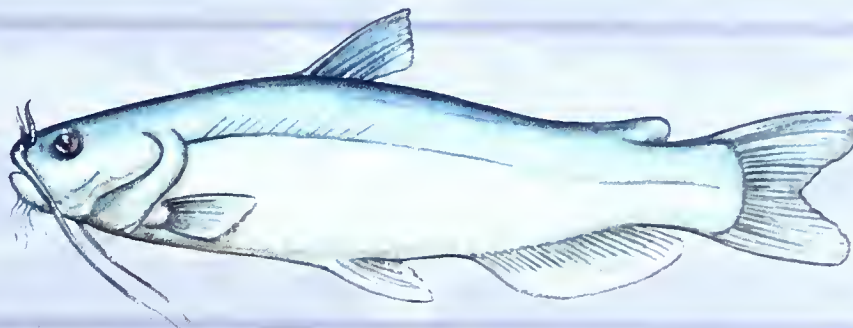


Channel catfish

1. Tail is deeply forked. Lobes are pointed.
2. Anal fin has more than 25 rays.
3. Chin barbels are black.
4. Bluish back and sides, whitish below; small irregular spots.

White catfish

1. Tail is forked.
2. Anal fin has 25 or fewer rays.
3. Bluish above to silvery below.
4. Chin barbels whitish.



Flathead catfish

1. Tail square or slightly indented.
2. Anal fin has fewer than 16 rays.
3. Head wide and flattened.
4. Yellowish-brown above, pale-gray below; blotchy sides.
5. Found only in Ohio River drainage.

Bullhead

1. Tail straight or rounded.
2. Anal fin has 18 to more than 24 rays.
3. Yellow, brown and black are most common. Colors vary.



Stonecat and Madtom

1. Tail is rounded
2. Adipose fin is connected to tail.
3. Yellowish-brown to gray and black, depending on species.
4. Stonecat, 6 to 8 inches. Madtom, 4 to 6 inches.
5. Stonecat found only in Ohio River drainage.



Pennsylvania League of Angling Youth
 Pennsylvania Fish & Boat Commission
 P.O. Box 67000
 Harrisburg, PA 17106-7000



LIFE JACKETS
They Float
YOU DON'T!

HEY, ANGLER READERS!

You can look forward to seeing the Pennsylvania League of Angling Youth (PLAY) newsletter in the *Angler* four times each year. But to get the full benefits of membership in PLAY, you need to complete the coupon below. Full membership in PLAY is only \$3.00 per year and members receive the PLAY Newsletter, a collectable patch, tacklebox stickers, a good luck fishing hook and several activity pages. Sign up your favorite youngster for PLAY or be prepared to share your copy of the *Angler*!



FISHING TIP

Learn how to "read" the water in a stream. Where the water's surface is broken, there is a rock underneath with "pocket water" downstream. Look for fish in these pockets. Pockets provide cover from predators and fish can stay there without much energy. Food gets filtered in by the current. **It's a great hangout for fish!**



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PLAY

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The Pennsylvania League of Angling Youth is an educational program designed to reach youngsters. Members receive a colorful sew-on patch, quarterly newsletter, publications, access to the PLAY Correspondence Center and more. **It's a bargain at only \$3.00 a year. Sign up today!**

Name _____ Age _____

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Make checks payable to: Pennsylvania Fish & Boat Commission, Mail to: Pennsylvania Fish & Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.

Flying Ants on the Juniata

by Vic Attardo

Understanding this unusual "hatch" and learning how to match the naturals can help you entice some of the Juniata's biggest smallmouths.

Juniata River near Newport

Pepper! Someone had sprinkled pepper on the water! At least, the little black dots looked like pepper. And soon, on this warm September afternoon, a scattering of smallmouths rose to take the floating condiments off the surface.

Of course, it wasn't pepper at all, or even parsley. The dots were tiny black ants, thousands and thousands of them. In a few minutes, every bass in the Juniata River was called up to the feast. And from the surface bulges I could tell that some were trophies.

Fortunately, this was not the first time I had come across such an ant swarm on the river, and I was actually prepared for what

was happening. I dug into my vest, pulling out a box containing an assortment of ant patterns, from a larger-than-life size 12, to a less-than-pinhead size 20. Making the midline choice, I picked a size 16 black ant hackled with a stiff feather along its thin waist. After tying on the imitation, I targeted a fish rising about 20 feet upstream and laid out a cast with an additional yard ahead of the mark. The imitation floated just where I wanted it and the bass surged to the surface to take the fake.

Even with such a small fly in such a big mouth, I had no trouble getting a hookset and the bass took off for the safety of the riffles. With only a thin 5X leader giving less than 4 pounds



Flying Ants **on the Juniata**

of line strength, I played the smallmouth gently. But hooked is hooked and I was able to land and release the fish after a respectable and exciting fight. The bass measured some 14 inches, somewhere in the neighborhood of 2 pounds, more if you considered all the real ants that were stuffed in its mouth.

For about two hours, I carefully waded through a pair of pools and tailouts catching bass after bass on size 16 flies. A couple of fish were close to 18 inches, a fine size for river smallmouths, and a length and weight that gives the fly rod angler plenty to think about. The mass of floating ants continued nearly unabated throughout this time. I'd hate to have to calculate the number of insects this represented, something in the millions, I'm sure. I broke off a few fish, and a few of my ants became so ragged that I changed them, as much to take a rest as to entice the fish.

Throughout the whole time, not one bass refused my fur and feather offerings. If I missed setting the hook or lost a fish in the first seconds of the fight, I'd wait a minute until it resumed feeding, and then reintroduced my fake. The smallmouths were so keyed to the ants that they took the imitation again and again.

What's happening here?

I recall the first time I came across an ant swarm on the Juniata. It was another warm, mid-September afternoon with the water temperature at a comfortable 68 degrees. I was wet-wading through a gentle riffle and the bass were aggressively taking crayfish patterns.

When the first surface activity began about noon, I thought perhaps the fish were rising to tricos or maybe some blue-winged olives—both mayflies that juvenile bass take. I remember how puzzled I was not to observe anything flying above the water while clearly seeing the aggressive swirls of the fish as they came to the surface.

I looked around further and while I still couldn't find any late-summer mayflies, I did start to notice a few ants. Their tiny gray wings stood up like tall-masted sails and they floated downstream with no additional movement. These ants were clearly not trying to break the surface tension and rise into the air like an emerging mayfly, nor were they skittering across the water like caddises—they were just there.

Gradually I saw an enormous numbers of ants, and the bass started going crazy. Smallmouths that I had fished over minutes before, and had no idea were there, rose to the surface to gulp the floating banquet. Sometimes it seemed like the workings

of a trout stream, some of the rises were that deliberate and pretty.

Though I caught a bunch of fish during that first ant swarm, I was left with a lot more questions than catches.

In the two hours that the ant activity began, peaked and then ended, I hadn't been able to see any of these winged insects fall from the sky or even struggle on the water as if they were trying to regain dry land. As the event progressed, I saw more and more dead or drowning ants, their pale wings lying supine on the surface. Sharp wind gusts seemed to increase their number on the water, but I couldn't figure out where they were coming from.

I noticed too that the bass seemed to prefer live ants with tall, unfurled wings—but, I considered, this may be a matter of timing. When most of the insects were dead, the fish seemed too full to eat any more. Some fish that I caught appeared as if they had been chugging cans of pepper. On occasion a big ball of mushed ants, looking like a mess of crushed mulberries, would lie in the corner of a fish's mouth.

I soon found that a floating pattern was more effective than a fly that had lost its starch and was riding under the surface, and that a spiky imitation, with some errant hackle, worked better than a smoothly tied fly that looks good in a magazine photo.

Why so many ants?

I know now that it is incorrect to call this mass of ants a "hatch," as in a mayfly or caddis hatch. Unlike those insects, these ants were not nymphs rising out of the water to become adults. Ants, of the order Hymenoptera, are a 100 percent terrestrial creature, and their entire life cycle—egg, larva, pupa and adult—usually takes place on land. The fact that the ants are dying on the water is solely a whim of nature after a nuptial flight.

It all begins when the male ants and fertile females react to some signal and fly into the air to mate. This can take place simultaneously among many colonies across a wide area, resulting in an unthinkable number of mating ants. Only certain male ants and fertile females have wings. Worker ants do not, and thus they remain on the ground.

Along most of its course the Juniata runs tight along a border of steep, rocky slopes that extend the length of the Appalachian chain. The entire region is a series of talus-topped ridges followed by narrow valleys and more ridges, some of the slopes having an elevation as high as 1,000 feet. The river cuts through at least 10 parallel ridges on its way from Altoona to the Susquehanna River above Harrisburg, and geologists actually call this section of the state the Ridge and Valley Region.

In the air, the result of all these stony projections is a strange tangle of wind currents and thermal drafts. And it is these up and down drafts that grab and deposit the ant swarms along the river during the mating flight.

This natural phenomenon results in some unusual scenes along the Juniata. I've been on the water in the midst of a huge ant drop while just a few feet away on the shoreline I couldn't find a single ant.

At the same time, I've yet to observe the mating flight or even detect the ants "falling from the sky." Though the actual drop can't be occurring too far away, all I've ever seen is the mass of ants floating on the surface. Remember, I'm not talking about one or two ants that were blown into the water as they crawled along some stream-side vegetation. Determining the numbers of ants during the Juniata drops would require higher mathematics.

The timing of the annual mating flight is a moderate variable. In various portions of the Juniata, I have met the ants from mid-September to late September. The earliest record I have is September 13 around Lewistown. The latest is September 27 in the Mifflintown area. On a hatch chart this would appear under the heading mid-September to late September.

Ant patterns

Even though the natural ants are clearly of the winged variety, the imitations you fish need not be fliers. I have tried a half-dozen patterns during these amazing ant drops and each one caught bass. Some patterns, of course, are better than others.

My least favorite pattern is a foam ant. Even with a hackled waist line, neither the bass nor I appreciate the way the foam imitations lie on the water. My next least favorite is a balsabodied ant. Without the pre-made bodies, these high floaters are difficult to make in small sizes and always seem too muscular among the tiny naturals. I love balsabodied ants when fishing faster water when imitating larger streamside ants that have lost their footing.

I occasionally use a hardshell ant made by coating thread wraps with a penetrating lacquer, and even though this style presents a nice imitation in smaller sizes, it's also time-consuming to create.

When all is said and done, nothing is easier to make and nothing works better than a dubbed ant of an antron/hare blend and a stiff, black or dun hackle. The antron gives the body just the right amount of sparkle and the blended fur is easy to roll into the ant's two distinct body segments, the abdomen and thorax. The addition of a pair of grizzly hackle tips gives the fly tier the impression he has created a winged ant, but I don't think the smallmouth care whether or not the wings are present, as long as the hackle is left spiky. Both the winged and unwinged fur patterns work equally well on the Juniata, however the winged variety with its barred white tips tied delta style at the waist stands out among the horde of naturals and is easier for the angler to see.

The size of my imitations are larger than the naturals. The Juniata ants are as small as size 20, maybe even 22, but I regularly fish with a size 16 and even a size 14 hook. The trick I employ is to tie a small bodied ant on a large hook. Since the size of most of the naturals is about 4 mm long, I tie a slightly larger

5 mm ant on a size 16 hook, instead of on a 18 or 20. You can get away with this when fishing smallmouth because they don't study a meal as much as trout as their eyesight is not as good.

However, when making an ant imitation, it is absolutely critical to mimic the abdominal pedicel, the thin waist. While most natural ants show a larger abdomen than thorax, and most ant imitations are tied to mimic this characteristic, the thorax/head unit and the separated abdomen of the flying ants is about equal. Thus, the segmentation for these ant flies is about equal.

I regularly see some rust or orangish-brown ants mixed in with the black Juniata ants. Some black ants even have a rusty blotch beneath their tummies, but black is the color I use for my imitations.

Dry ant presentations

Strict upstream dead-drifting can be difficult in some heavy riffles on the river, so the technical alternative is to cast upstream and across. This is my preferred method, especially around tailouts and the transitional waters between a moderate riffle and a wadable pool.

Still, there are plenty of places on the river where I am forced to fish downstream with a dry fly. Instead of presenting a drowned ant, I make a slack line or pile cast and let the curves of the fly line straighten out in the downstream drift. Before the curves are pulled straight, the ant rides naturally over the surface and into the mouths of many smallmouth.

When feeding, the bass frequently take up stations on the shallow side of long pools or flats, or on shallow mid-river humps and bars next to deeper depressions.

Whenever possible I don't make a delicate presentation in casting an ant to a bass, at least not as delicate as I might make when casting to a trout. I bring my tippet down with a splat to further help the fly penetrate the surface film and to get the attention of the bass. Smallmouths don't often drift out of their feeding lanes to take your fly, but a little commotion seems to help them decide to choose your offering over all the naturals.

My river notes also indicate that when I was forced to adopt strict down and across fishing tactics because of currents and depth, I fished the dry ant as a skittering caddis and the bass would take the imitations despite no skittering activity whatsoever from the naturals. I think it's just a sign how much these fish like the taste of fresh ants.

Spinfishing choices

For non-fly fishermen who come across an ant swarm, this translates to the use of a light in-line spinner or a floating or neutral buoyancy minnow plug. The bottom line is that an unweighted streamer or minnow lure works during the ant drop.

Ant swarms take place over a number of Pennsylvania waters and they always seem to bring fish to the surface from seemingly out of nowhere. Similar tactics work on the upper Delaware during the ant drop there, and other ridge-surrounded streams and rivers can suddenly be visited by a host of flying ants. The Juniata is just one place to fish through a swarm, but oh, what a place.



Flying Ant

PA'S BEST Fall Trout Angling

The Commission's Area Fisheries Managers suggest the following waters for anglers looking for good trout fishing this fall. These waterways include places where you can find numbers of fish, fewer numbers of fish but larger individual fish, or numbers of good-sized fish.

Water	County
Dyberry Creek-Delayed Harvest	Wayne
Lackawaxen Creek	Pike-Wayne
Butternut Creek-Delayed Harvest	Wayne
Bushkill Creek-Delayed Harvest	Monroe
Bushkill Creek	Pike
Dingmans Creek-Delayed Harvest	Pike
Brodhead Creek	Monroe
Lehigh River	Lackawanna/Monroe
Lehigh River	Luzerne/Carbon
Tobyhanna Creek	Monroe
Jordan Creek	Lehigh
Lehigh Creek-Delayed Harvest	Lehigh
Bushkill Creek	Northampton
Neshannock Creek-Delayed Harvest	Lawrence
Shenango River	Mercer
Cool Spring Creek-Delayed Harvest	Mercer
Slippery Rock Creek	Lawrence
Woodcock Creek	Crawford
W. Br. Tionesta Creek	Warren
Cherry Run	Armstrong
Oil Creek-Delayed Harvest	Venango
Little Mahoning Creek-Delayed Harvest	Indiana
N. Fk. of Redbank Creek-Delayed Harvest	Jefferson
Caldwell Creek-Delayed Harvest	Warren
E. Br. Tunungwant Creek-Delayed Harvest	McKean
Kinzua Creek-Delayed Harvest	McKean
Driftwood Branch	Cameron
Stevenson Reservoir	Cameron
White Deer Creek	Union
Lyman Lake	Potter
Lake Hamilton	Tioga
Poe Creek	Centre
Poe Lake	Centre
Black Moshannon Creek	Centre
Muncy Creek	Lycoming
Kettle Creek Lake	Clinton
Janesville Dam	Clearfield
Little Pine Lake	Lycoming
Hunters Lake	Sullivan
Fishing Creek	Columbia
Harvey Creek	Luzerne
Bowman Creek-Delayed Harvest	Wyoming
S. Br. Tunkhannock Creek	Wyoming
Nescopeck Creek-Delayed Harvest	Luzerne
Roaring Brook	Lackawanna



East Branch Perkiomen Creek

Water	County
Little Schuylkill River-Delayed Harvest	Schuylkill
Bear Creek-Delayed Harvest	Schuylkill
Pickering Creek-Delayed Harvest	Chester
M.Branch of White Clay Cr.-Delayed Harvest	Chester
Muddy Run Recreation Lake	Lancaster
Hay Creek	Berks
Tuscarora Lake	Schuylkill
Darby Creek	Delaware
East Branch of Perkiomen Creek	Bucks
Big Spring Creek	Cumberland
Green Spring Creek	Cumberland
Opossum Creek Lake	Cumberland
Laurel Lake	Cumberland
Mountain Creek	Cumberland
Clarks Creek	Dauphin
Quittapahilla Creek	Lebanon
Manada Creek	Dauphin
Conewago Creek	Adams
Laurel Run	Huntingdon
Great Trough Creek	Huntingdon
Yellow Creek	Bedford
Falling Springs Branch	Franklin
Conococheague Creek	Adams/Franklin
East Branch of Antietam Creek	Franklin
Canoe Lake	Blair
Stone Valley Lake	Huntingdon
Holman Lake	Perry
Cowans Gap Lake	Fulton
Deer Creek	Allegheny
Pine Creek	Allegheny
Buffalo Creek	Armstrong/Butler
Traverse Creek	Beaver
Dunbar Creek	Fayette
Laurel Hill Creek	Somerset
Youghiogheny River	Somerset
Little Chartiers Creek	Washington
Loyalhanna Creek	Westmoreland
Deer Lakes	Allegheny
Lake Rowena	Cambria
Dunlap Creek Lake	Fayette
Canonsburg Lake	Washington
Dutch Fork Lake	Washington
Keystone Lake	Westmoreland
Lower Twin Lake	Westmoreland
Mammoth Lake	Westmoreland



Jigging Spoons

Know-How

by Darl Black

Mention the word "spoon" in a fishing context to anglers, and most realize you are referring to an artificial lure of metal used for casting or trolling. But mention the term "jigging spoon" to those same anglers, and you will likely receive puzzled looks.

Jigging spoons are one of the deadliest deepwater lures, yet only a small percentage of Pennsylvania anglers fish them. This quick-sinking artificial allows pinpoint presentations to bottom structures. Jigging spoons also help anglers target suspended fish observed on a depthfinder, or they help you make long casts to predator schools foraging near the surface. Spoons work great in strong currents, too.

How does a jigging spoon differ from other spoons? Which species can be caught on a jigging spoon? How and when should it be fished? These are the questions anglers need to answer to become accomplished jigging spoon fishermen.

In fishing, the term *spoon* is used to describe a wide range of lures that have a general spoon shape, but are dissimilar in actual usage. There are traditional "wobbling" or "casting" spoons, which gained fame on Canadian fishing trips for northern pike, walleyes and lake trout. An example is the Dardevle. Closely related to the exposed-hook wobbling spoon is the "weedless" spoon, such as the Johnson Silver Minnow, with a reputation for hauling bass from vegetation. On the topic of heavy cover, there is a small category of "topwater" spoons made of plastic, which are dragged across the surface of thick weedbeds—like the Heddon Moss Boss. There are also "flutter" spoons that are thin, very lightweight metal slivers designed solely for trolling on downriggers or with heavy sinker rigs for trout, salmon and walleyes.

Finally, there are jigging spoons. These

may be fashioned from steel, brass or chrome-plated lead. Some have a concave design, while others are simply flat slabs. Spoons used for jigging are heavy for their overall size. This is usually achieved by making the body thicker than other metal spoons.

It's easy to distinguish jigging spoons from weedless, topwater and flutter spoons. But they may not be readily separated from wobbling spoons. Actually, certain cast-and-retrieve wobbling spoons can be used for spoon jigging. With some spoons bridging this gap, the difference between a wobbling spoon and a jigging spoon lies

water casting spoons in freshwater. The Hopkins Shorty, popular among the saltwater crowd, caught on with freshwater anglers. Today name *Hopkins* is synonymous with spoon jigging.

I was introduced to the jigging spoon on Kinzua Reservoir in the 1970s. Warren County resident Wayne Shreve, a hardcore bass fishing acquaintance, had made a fishing trip to the TVA reservoirs in Tennessee and brought back the structure spoon technique. However, when Shreve tried spoon jigging on Kinzua's structure, instead of fooling the smallmouth bass he intended to catch, he caught walleyes—

lots of walleyes.

When Shreve invited me to join him for a fall day of walleye fishing on Kinzua with the stipulation that the only lure we would use was a jigging spoon, I thought he had taken one too many hard bounces in his bass boat. But I went anyway. As it turned out, my arms gave out before the fish quit hitting. Although I do not recall exactly how many walleyes we caught and released, I do remember it was more than I had ever hooked in one day.

Since that day on Kinzua in 1977, I have never been without a supply of jigging spoons. Over the years I have learned that spoons can be applied to a variety of situations. Spooning is not limited to walleyes and bass. Stripers, northern pike, muskies, crappies, white bass, yellow perch and freshwater drum are caught regularly. In addition, I have taken incidental bluegills, channel cats, bullheads, and steelhead on the spoon. Any fish that eats minnow forage can be caught on a spoon.

Selecting a spoon

The fluttering, erratic injured baitfish movement of the spoon triggers strikes from gamefish and panfish. However, it is the flash that draws fish to the spoon in the first place. Therefore, any spoon



primarily in the method of presentation. Jigging spoon presentations involve vertical jigging, drift jigging and cast-and-snap jigging.

Decades of spooning

The advent of spoon jigging in freshwater can be traced to the reservoir building boom in the 1950s and 1960s. Groups of local fishermen in states from Tennessee to Oklahoma discovered that during a mid-South winter they could catch bass on a heavy spoon jigged vertically on deep structure or in standing timber. These early jigging spoons, or "structure" spoons, as some bass fishermen called them, were basically heavy wobbling spoons.

Sometime during the 1960s, enterprising anglers tried jigging compact, heavy salt-

Jigging Spoons

Know-How

I use must have a reflective finish. The greatest flash comes from polished metal. Reflective prism tape holds second place. Painted finishes (primarily found on lead slab spoons) have little, if any, flash, so I avoid them.

Don't let spoons become dull. Periodically, clean them with WD-40 and a soft cloth. If further polishing is needed for badly tarnished metal spoons, buff them lightly with fine steel wool and then apply a protective coat of WD-40.

Spoons used for jigging include flat models like the Hopkins, Strata, Rattle Snakie, Pirk Minnow, Crippled Herring, Kastmaster and Swedish Pimple. Examples of concave spoons include the Krocodile, Cop-E-Cat, Little Cleo, Fire Eye, and Dixie Jet. Although the Dixie Jet is no longer available, I still have a small supply that I would not trade for any of the newer spoons.

Should you use a concave or a flat spoon? Expert spoon fishermen do not agree. Both types catch fish under a variety of circumstances, so use either one or both.

Perhaps the biggest mistake the would-be spoon angler makes revolves around choosing the lure weight. There is a misconception that a heavier spoon is best for larger gamefish and a lighter spoon is best for smaller panfish. But consider this: Using the popular Hopkins jigging spoon as an example, the 1/8-ounce spoon is just a hair short of 1 1/2 inches, and the 3/4-ounce spoon is 2 1/2 inches. That is only a one-inch difference between the small and large spoon. In the real world of baitfish, that's not much of a difference.

That smaller spoon will take big walleyes and the larger spoon will take big crappies—I've done it on many occasions. The decision on which weight (or size) spoon to use should rest on factors largely independent of the species of fish you target.

The foremost factor is control. You must be able to maintain feel of the spoon when jigging. This means that a strong current or choppy water requires a heavier spoon. Predator fish often feed ravenously on disoriented baitfish on windy days, so spoons can really get a workout under these conditions.

The same applies to depth—the deeper the water, the heavier the spoon. There is no hard and fast rule, but generally if faced with water deeper than 25 feet, I automatically jump to a 3/4-ounce spoon.

As mentioned previously, flash is an important part of the presentation. Situ-

ations where light penetration is low—dingy water and deep water—demand a larger lure to provide more area to reflect available light.

Finally, match the spoon to the size of the dominant baitfish in the lake at a particular time. For instance, use a small spoon in the early summer when massive schools of small young-of-the-year baitfish roam the lake. Use a larger spoon in the fall when mature baitfish abound.

Quality hooks are critical to spooning success. Some new spoons come equipped with a plated, heavy-wire hook for salt-water use. Replace this hook immediately with a bronze hook. The best hooks are round-bend short-shank trebles, which are popular replacements for crankbaits.

Some spoons are equipped with a single hook. However, I believe this reduces successful hookups with fish in many cases. Clipping one tine of a treble to make it a double hook helps reduce snagging without affecting the hooking ratio of fish.

Sharpening hooks should go without saying. But just in case you were wondering—sharpen each tine of the hook with a file.

When, where to spoon

Jigging spoons are versatile. They are useful in reservoirs, natural lakes and deep rivers. They are generally considered most effective in water temperatures below 60 degrees, but that should not prevent their use through the warmer months under certain conditions. Perhaps it might be more accurate to say that vertical jigging is more effective in cool water temperatures, while cast-and-snap jigging is more effective in warmer water. But even that statement should not be taken as an absolute.

I rarely consider using a jigging spoon in less than 10 feet of water. Spoons excel in the depths of 20 to 50 feet. Casting retrieves may be used when working open water points or humps, particularly over relatively clean bottoms. Jigging spoons are not a good choice for areas of vegetation. For deepwater timber, vertical jigging is a better approach. It is surprisingly easy to shake a jigging spoon loose from wood cover. Straight-down jigging is also the way to fish certain vertical structures like bluffs or bridge pilings, as well as edges like creek channels.

Smallmouth and largemouth bass. A jigging spoon and deepwater smallmouth

go together like peanut butter and jelly. Vertical jigging is great in the early spring while smallies are staging on deepwater breaks. If smallmouth schools chase bait near the surface during the summer, spoons let you make long casts to the skittish fish. Again in the fall when smallies are ravaging deepwater baitfish schools on structure, spoons are in demand.

Largemouth success reaches a peak from mid-fall to ice-up when the bass move to the main river channel or into deep standing timber. Largemouth bass become sluggish in water below 48 degrees, and a "shake-in-the-face" spoon presentation works on these fish.

Striped bass and white bass. Jigging spoons are standard issue for striped bass and striper hybrids. Spoons are most effective in the early spring during deepwater staging and again in the late fall when the fish feed heavily in cool water. Sometimes spoon success may be enjoyed in the summer when stripers remain deep to feed on shad or alewife. For white bass, a jigging spoon presentation is useful all summer and fall.

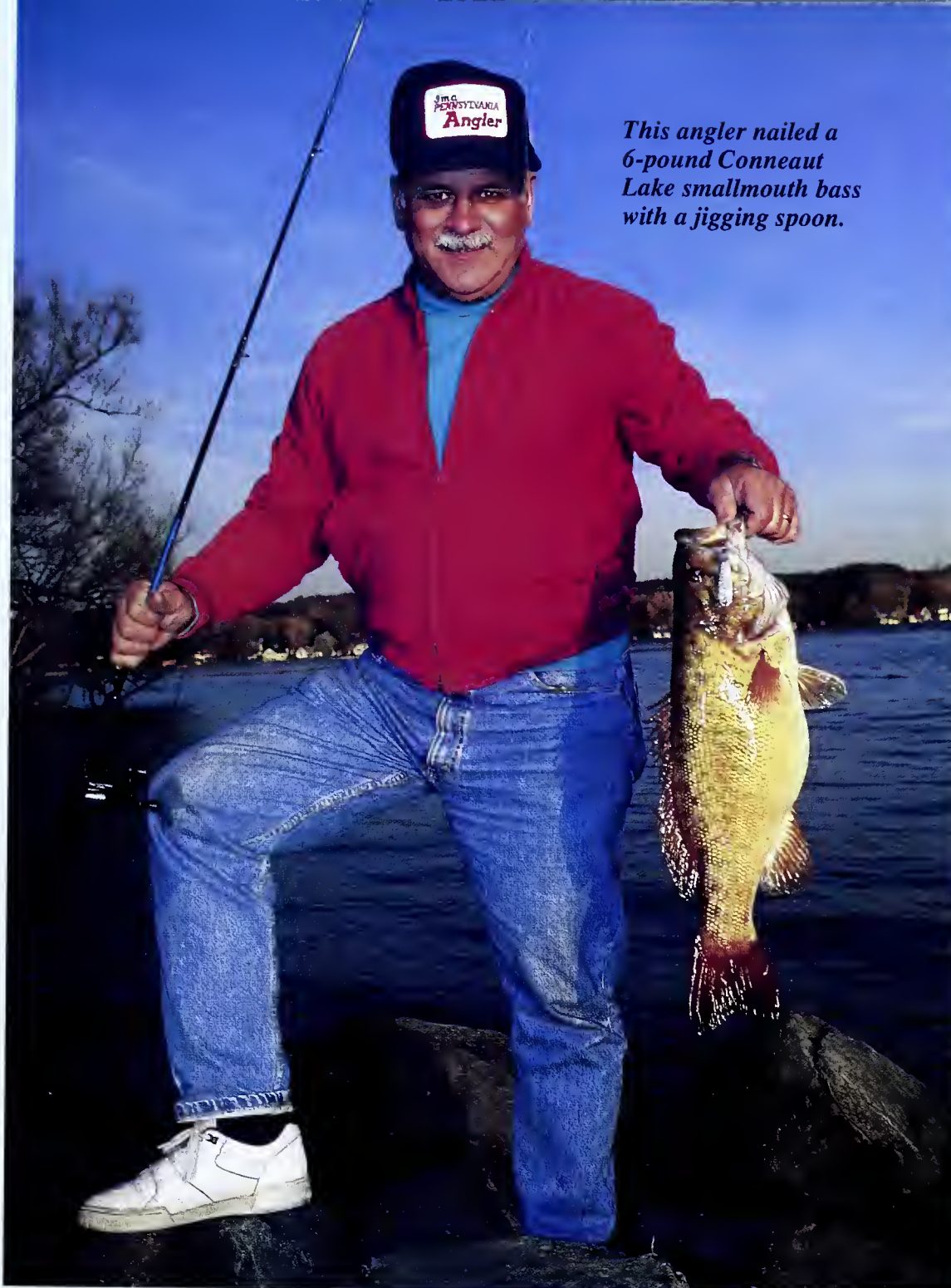
Walleyes. Without a doubt the best time for spooning is mid-fall to late fall when walleyes are going gangbusters on baitfish. Depending on the particular lake or river, the fish may be from 10 feet to 40 feet deep. In some lakes, when walleyes are observed suspended over deep water in the summer, vertical spooning is an alternative to trolling.

Panfish. Crappies and yellow perch consistently fall victim to jigging spoons. Whenever these species are in water deeper than 15 feet, a spoon option should be considered. In the summer, spoons draw strikes from active panfish. In the cool water of fall, spoons draw strikes from active and passive panfish. The average perch or crappie taken on a spoon is larger than the typical panfish taken on live bait.

Spooning techniques

Match your rod and line to the weight of the spoon. For spoons from 3/8-ounce to 3/4-ounce, a medium power baitcasting outfit with 10- to 15-pound-test line is recommended. Lighter spoons may be fished on a medium power spinning outfit with 8- or 10-pound-test line. Any rod selected for spooning should have a strong backbone, but a flexible tip.

Vertical jigging. This is perhaps the most common spooning technique. It's simply positioning the boat directly over the site to be fished, free-spooling the spoon straight down to the desired depth, and



This angler nailed a 6-pound Conneaut Lake smallmouth bass with a jigging spoon.

ture while jigging and searching for fish.

Another vertical jigging option is working deep river pools. The electric motor is turned upstream to slow the boat so it does not drift faster than the spoon, which is bounced along the bottom.

Drift jigging. This technique is a modification of vertical jigging. It's used in open water for species like perch, walleyes and white bass when they spread over a particular depth instead of schooling tightly on structure. In this instance, the wind moves the boat as anglers trail spoons. Rods are pumped 18 to 24 inches to achieve the lift and fall action that is necessary to entice strikes. However, this presentation is not exact. Line is fed to the spoon in an attempt to keep it near the bottom or at a certain distance from the bottom, but precise depth control is difficult.

Cast-and-snap retrieve. This technique is useful for fishing structures like points or humps. The spoon is cast, counted down to a desired depth, and retrieved with repeated jerks. The rod is snapped upward, causing the spoon to jump forward and slightly upward. Slack line is reeled in as the spoon falls several inches. When the line tightens, an upward snap is applied again.

For this retrieve, most anglers position the boat over deep water and cast to the structure. However, reverse positioning is generally more effective. With the boat over the shallower water, cast to deeper water and work the spoon up the structure.

A very rapid cast-and-snap retrieve can be used when stripers, white bass and smallmouths are in a surface feeding frenzy. During the summer, these gamefish often force a school of forage fish to the surface and then bust up the school and chase down injured prey. Casting a spoon into the frenzy will draw a strike as the spoon flutters up and down like a minnow or shad.

A jigging spoon is not a magic bait, but it is a tool that every angler should be familiar with and have available when conditions call for it.

ANGLER

jigging. The depth fished may be all the way to the bottom, or in the case of suspended fish, counted down at one foot drop per second until the level of the observed school is reached. If jigging within the cone of a depthfinder, it is possible actually to watch the spoon on the screen.

With the spoon at the desired depth, start the rod tip at about 7:00 and sweep it upward to about 10:00. Immediately begin lowering the rod tip to the 7:00 position, but not too quickly. Lower the tip at the same speed the spoon is pulling the line into the water. Watch the spot where the line enters the water for a little "jump," which might indicate a bite. Also keep one finger on the line to feel a "tick"—another indication of a strike. Strikes always occur as the spoon falls.

In the above standard procedure, there are numerous options that may be exer-

cised depending on the mood of the fish. Experimentation is needed to figure out the nuances required on a particular day. Sometimes the upward sweep should be only a couple of inches. Other times it may be two to three feet. The sweep may be changed to a hard snap. Higher and harder snaps are usually reserved for aggressively feeding predators. When fish seem turned off, do not move the spoon vertically—just shake the rod tip to bounce the lure in place. For early spring smallmouths, one of the best presentations is letting the spoon lay on the bottom and jumping it about 10 inches every five seconds.

Vertical jigging can be done from an anchored boat, or from a boat controlled with an electric motor. The electric motor may be used to hover in one spot or to move the boat slowly along a struc-

Why Tag Fish?

by Vic Attardo



Jaw tag. Above, biologist applies a jaw tag to a smallmouth bass.

"Tag, you're it!" As a kid I loved to play tag. Little did I know that the concept of tagging—in this case, putting a mark on something for future identification—was so important to scientists.

Yet, when it comes to fishing and fisheries management, tagging is more than a children's game. It's a significant tool for modern science.

The Fish and Boat Commission says, "Tag, you're it" to many types of freshwater fishes and even two species of saltwater gamefish. By using a variety of tagging or marking devices, fisheries managers can study the complete life history of a fish. Tagging can provide information on population size, migration routes, the success or failure of stocking programs, and the rate of reproduction, as well as such basic data on a fish's sex, growth rate and age.

It isn't always the easiest task, but nowadays the process of tagging is accomplished with a variety of techniques. Tagging can be done by simply snipping a fish's fins, by placing an internal wire in its body, or by marking a group of fish in a chemical bath. A few of the more common physical tags in use today include jaw bands and wire tags. But procedures have been refined to include less obtrusive methods such as tetracycline marking, a process that is helping biologists study the restoration of the American shad on the Susquehanna and Delaware rivers, and microchips, which are being placed in the bodies of paddlefish in the Allegheny River drainage.

In modern fisheries management, the type of tag selected for use depends on several factors, including where the fish swims and who is intended to find the tag. A tag must allow the fish to grow and swim without restrictions. Some tags, such as those applied to anadromous striped bass, need to withstand the harshness

of saltwater. Others need to be easily recognized by the casual fisherman, while still others reveal their secrets only under the eye of a microscope.

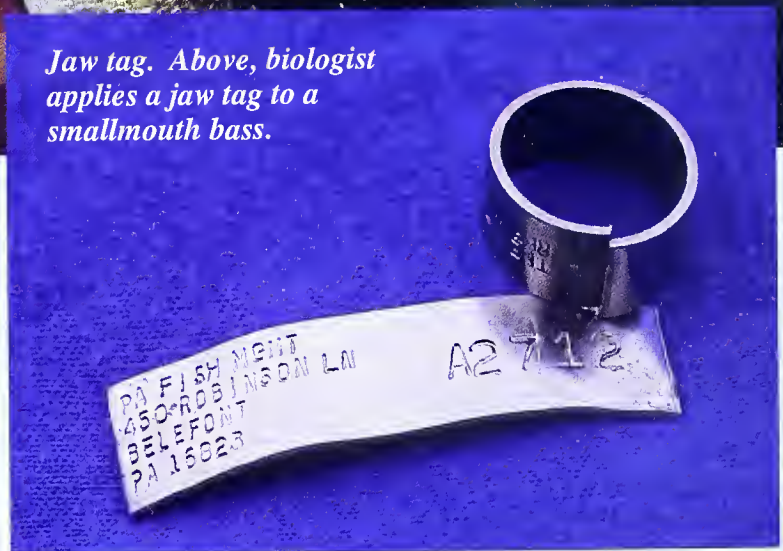
Science seems to be constantly fiddling with various tagging procedures, and even though no ideal method has been found, biologists strive to use tags that minimize damage to the fish or affect its behavior.

What we've learned so far

We have always been fascinated by the strange underwater creatures we call fish, and tagging is basically the only way to study these aquatic wonders over a period of time.

"Tagging has been around probably ever since people could get their hands on fish," says Dick Snyder, Chief of the Commission's Division of Fisheries Management.

One of the first tagging operations that Snyder took part in when he began his career with the Commission in the early 1960s, was actually a promotion run by an oil company. The com-



pany operated a contest in which anglers returned plastic tags from caught fish for prizes donated by the oil company.

"We got quite a lot of information from that," Snyder said. "It helped us in many ways and we learned about fish movement and the return to creel"—what anglers simply call the keeping of fish.

"Every tagging is a success in terms of learning something," Snyder notes.

Some Commission studies were done for the purpose of debunking long-held beliefs that had no scientific basis. Sometimes the studies revealed a previously unknown piece of information that later become vital to the Commission's management practices.

In one example back in the early 1970s, Snyder said the Commission evaluated the survival rate of trout that were stocked during the fall of the year versus trout stocked in the spring. At that time, some anglers believed that trout stocked in the fall, in streams closed to angling, would overwinter in their new homes and become larger, stronger and somehow even "wilder," if they had time to grow outside the hatchery.

But the Commission's study in Potter and Tioga counties found just the opposite. Through their tagging effort, biologists discovered that many trout stocked in the fall couldn't even survive through their first winter, let alone grow. In a fall stocking the hatchery-reared fish would be placed in the water during a very stressful time of year, in terms of the availability of food and extremely cold water temperatures. What's more, the fish simply did not have the ability, call it "common sense," to adjust to the rigors of the frozen season. As a result of the study, the Commission eliminated the fall stocking of some streams. These same fish found homes elsewhere during the spring stocking programs.

Some anglers now believe that electrofishing—passing an electrical current into the water to stun fish for capture and tagging—kills the very fish it is intended to count.

Snyder says the Commission learned just the opposite from a study on brook trout in Cumberland County's Big Spring Creek. For several years, the Commission electrofished and tagged brookies in the same sections of the stream. In time, biologists discovered they were collecting the identical fish year after year. Some of the tagged fish were over 20 inches long.

What we're learning

The work of Commission Area Fisheries Managers is constantly evolving. Not only are more sophisticated tagging methods used, but biologists are now able to glean a greater variety of information from their research.

As Snyder pointed out, the Commission currently is engaged

in five major tagging projects. They range from marking Pymatuning Reservoir walleyes for population and growth information to the restoration of the paddlefish in Pennsylvania rivers in the Ohio/Mississippi drainage. The Commission is also involved in studies of striped bass in the Delaware River, smallmouth bass in the Susquehanna drainage, and American shad in the Susquehanna drainage and the Lehigh River.

In 1994, Commission Warmwater Unit Leader Bob Lorantas began an examination of smallmouth bass in the Susquehanna drainage. The study is part of a five-year program to estimate the survival rate of adult smallmouth bass as well as track their movements. As Lorantas explained, the project uses two sections of a river, one located in an area under Big Bass regulations, the second, or control area, governed by conventional regulations.

To perform the research, biologists are using jaw tags to track the smallmouths. Made of stainless steel, the jaw tags are affixed to the fish by making a small incision behind the bass' lower jaw and slipping the tag into the incision.

If you have ever seen a nature show in which birds are banded, placing a ring around the bird's leg—a kind of leg iron without a chain—that's what a jaw tag looks like, except in this case, it goes into the bass's mouth. Jaw tags are obtrusive and easy to notice and they stay attached to the bass until removed by human hands. When anglers catch a tagged bass they can't miss the circular piece of metal, and the biologists hope they return it to the address stamped in the ring. The tags identify each individual bass with information that scientists read and apply to their research.

During the last two years, jaw tags were placed onto some 2,000 smallmouths measuring over 11 1/2 inches long. Already Lorantas has discovered some startling information about smallmouth travels.

"What we learned was that in a free-flowing river, 15 percent of the fish moved up to 25 to 50 miles from where they were originally tagged. That was really an eye-opening discovery."

The study has also found that six percent of the bass moved more than 50 miles. In fact, the mean distance traveled by the tagged fish has been 12.1 miles.

"Most of the scientific literature suggests that bass move about one to four miles and there are studies showing fish moving 10 miles during the spring spawn, but 25 to 50 miles—that was pretty surprising," Lorantas said.

Everybody loves a baby

Another project Lorantas oversees is a study on 17 lakes to learn about walleye survival rates. It's another bit of science that has already debunked an anglers' myth.

Lorantas said it was "common knowledge" that fish stocked



These tags are applied to a fish's back.

Why? Tag Fish?

as larger fingerlings, four inches or longer, had a better survival rate than smaller fingerlings two to three inches in length.

The importance of knowing whether this is true or not is in the financial aspect of fisheries management. A smaller fingerling doesn't cost as much to raise as a larger fingerling, which spends anywhere from 45 to 60 days in the hatchery. Fry—fish only a few days old—cost even less to raise and quickly place into a natural setting.

The study, which began in 1993, has so far found that small fingerlings get along just as well in their new homes as their larger brethren. The findings have allowed the Commission to stock the smaller walleyes at a sizable savings.

The walleye study has also helped determine which of the 17 lakes has the highest survival of tiny fry. Lorantas said the Commission has found that some lakes are consistently better than others in supporting the smallest “baby” fish, resulting in even more savings when the less expensive fry are stocked.

These important walleye projects were performed not with jaw tags or coded wires but with the use of chemical marking—specifically, a bath in a solution of tetracycline—which brings us to Commission biologist Mike Hendricks.

Friends, fishes, lend me your ears

Hendricks is the acknowledged expert in chemical marking in the Commission. His work on the restoration of American shad in the Susquehanna drainage has been highly publicized. Through his findings, the Commission is evaluating the shad hatchery program as well as proving the ability of the Susquehanna to produce a self-sustaining shad population.

One important aspect of Hendricks' labor is the need to distinguish between hatchery-reared fish and fish that arrived in this world through the natural spawning process. When the program was just beginning, this requirement presented quite a problem. Because shad fry are extremely fragile—simply touching one can kill it—traditional tagging methods were out of the question. Obviously a new technique was required to accomplish the biologists' goal, and eventually the process of tetracycline marking was born. However, science does not reveal its answers under the wrapping of one package. It took a number of discoveries and years of work to perfect the technique.

One of the initial discoveries was finding that a fish's earstone contains visible lines, or rings, which could be interpreted like the rings in a tree trunk. The earstone, or otolith, was not only capable of revealing a fish's yearly age, but it could be examined for evidence of daily growth.

In the early stage of a fish's life, the otolith is the only calcified structure inside the body—what will eventually become the skeleton is still soft cartilage. Scientists call the otolith an “earstone” instead of an “ear bone” because the otolith is not a support-

ing skeletal structure. Instead, the earstone actually floats inside the ear cavity, functioning in both hearing and balance.

The next piece of the scientific puzzle was administering tetracycline to young fish and the discovery that the chemical could be seen in ultraviolet light. When shad fry were placed in a solution of the chemical, the tetracycline passed through the entire fish but adhered only to the calcium in the earstone.

Tetracycline is not a common dye and thus is not visible in white light. But the chemical is fluorescent and can be seen under ultraviolet light. Scientists found that at any point in the fish's life, they could remove the tetracycline-laced otolith, grind a paper thin section of the calcified earstone, mount it on a microscope and study it.

The process has become so sophisticated that by immersing the fry a number of times, Hendricks can determine not only the exact age of the fish, down to the day, but he can also send himself chemical messages in the markings, such as which hatchery raised the fish and which specific stocking site was used.

Since 1985, the Commission has released some 115 million shad fry into the Susquehanna. In the spring of 1995, 62,000 adult shad were captured in the river. Through the study, the Commission has learned that 67 to 90 percent of those shad taken in the Susquehanna are hatchery-reared fish.

These findings have meant a considerable change in management practices. Before the advent of tetracycline marking, restoring shad stocks through hatchery rearing was considered a useless endeavor with little chance of success.

“No one thought that 8- to 20-day-old stocked fish would survive,” Hendricks said. “My highest dreams were that maybe one in 1,000 fish would make it.”

Now scientists know the survival rate of hatchery-reared shad—fish that will return to the river in later years to spawn—is one in 400 fry.

“That was a huge surprise to us,” Hendricks said. “Tetracycline marking demonstrated the survival of the hatchery fish.”

The result of the study has been a renewed interest in hatchery programs. Previously only Pennsylvania raised hatchery shad, but now Maryland, Virginia, Maine and the U.S. Fish and Wildlife Service all have hatchery restoration programs.

Just as importantly, the success of the program prompted utility companies to build fish ladders on the Susquehanna River. Three more lifts are expected to come on line by the turn of the century—Holtwood and Safe Harbor lifts in 1997 and York Haven Dam by 2000—re-opening over 200 miles of river habitat for the returning shad.

Modern tagging is sophisticated, labor-intensive work. It's the work of dedicated people interested in knowing about, and improving, the natural world.



If you catch a tagged fish, you help biologists greatly by returning the tag to the address on the tag, and providing valuable information about where and when you caught the fish.



Pennsylvania Fish & Boat Commission

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Commission Volunteers Recognized

Robert Davy (right), Deputy Waterways Conservation Officer in the Northcentral Region, and Godfrey Studenmund (left) Education and Information Volunteer of Rebersburg, were recently recognized by the Pennsylvania Association of Conservation Districts (PACD). They were recognized by PACD at the 1996 State Envirothon for their involvement in the Envirothon program. The Envirothon is a high school environmental competition sponsored by PACD and other state



photo-Paul Swanson

and local resource agencies. High schools throughout Pennsylvania participate in county-level competition, with the county winner advancing to the state competition. Bob and Godfrey administer the Commission's aquatic station in several counties each spring and help out at the state competition in June. They have also served as consultants for counties just getting started with the Envirothon Competition.



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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Angler's Notebook

The best walleye rod is one that has fast action. In other words, most of the bend occurs near the tip.

This allows anglers to feel the sensitive hits that walleyes are notorious for making. By having this type of rod, you'll find that you'll pull in more walleyes.

It is always nice to capture your fishing memories on film, especially when you reel in the catch of a lifetime. When you're done with your film, though, don't throw away the film canister. It can be used to store sinkers, swivels, hooks, lures and other fishing tackle.

Adding more than one splitshot to the leader of your fly line can make casting awkward. To avoid this, don't put the shot at the same location along the leader. Separate them by several inches. This makes casting easier, while still getting your offering to the bottom.

For the second year now, anglers will find more company on many Pennsylvania lakes and rivers in September—hunters participating in the early goose season. Although they can be difficult to spot at times because of the camouflage they commonly wear, keep an eye out for them and be aware that they may be on the water. This promotes both safety and cooperation among hunters and anglers.

When loading new line onto a spool, it is important that the line has tension on it so it winds tightly. To do this, run the line through a large book, like the phonebook, before reeling it onto the spool. The closed book applies enough tension to properly load your line.

illustration- Ted Walke

Spinners are one of the most versatile lures. Their lustrous finish and erratic motion makes them difficult for fish to resist. They are not only good for trout, but for bass, crappies, pike, muskies, and pickerel. Silver and gold are the two most popular and effective colors. Vary your retrieve, making it irregular at times to imitate a wounded baitfish.

When fishing for largemouth bass, first tie on a topwater lure, such as a Jitterbug, Torpedo or Zara Spook. If that doesn't work, try a crankbait. If you still aren't successful, try Texas-rigging a rubber worm. If the bass are willing to feed, they will most likely take one of these presentations.

Trout can be tough to catch in low and clear water, especially on high-pressured waters. One of the biggest reasons for rejection, when fishing dry flies, is the trout seeing your leader. Floating leaders are easier for the fish to see. To combat this, run some fly sinking material along the last foot of the tippet. This makes it more difficult for trout to spot your leader, and can help you elicit more strikes.

Nymphs are great trout catchers. It is said that trout feed 80 percent of the time underneath the surface. Many anglers, though, use nymphs that are too big. Don't be afraid to use smaller sizes, such as flies in sizes 16 to 20. You'll catch more trout, especially in the low water of September.

Most fish have a great sense of smell, so chemical scent attractants can be very effective. Not only do they draw fish to your lure, but when they strike, they are more apt to hang onto your lure longer, giving you more time to set the hook. Be sure to keep a bottle in your tackle box. They can sometimes spark action during an otherwise slow day.

New Fishing Tournament Regs Get Green Light

Regulations codifying the permit procedure for competitive fishing tournaments were unanimously adopted by the Pennsylvania Fish and Boat Commission during its summer meeting July 20-21 in Mechanicsburg. The new tournament fishing regulations codify the criteria for a general tournament permit and for tournaments on Commission-owned property. The rulemaking creates an appropriate balance between the protection needs of the resource and the desires of anglers who participate in organized fishing competitions. On average, there are some 1,000 fishing tournaments held annually on Pennsylvania waters.

Some key provisions on the new regulations include:

- The definition of a competitive fishing event as an event that is promoted and involves fishing over a specified time period for prizes. Fishing derbies for children or special populations are generally excluded from the permit requirements except those held on Commission property where a special-use permit is required.

- A timetable for application submission. Tournaments involving 50 or more boats will submit applications between October 1 and December 1 of the year before the year of the proposed event. Smaller tournaments or those involving shore fishing will submit applications at least 60 days before the proposed event.

- If the tournament conflicts with another tournament at the same place and time, the tournament where fish are to be released will be given preference over events where fish are intended to be taken.

- Off-site parking or a limit on the number of participants may be required when the number of participants exceeds the capacity of the facilities where the event is to be held.

- A waiver of culling prohibitions may be sought by organizers of a tournament that establishes a limit less than the daily limit governing the body of water and which penalizes the return of dead or injured bass.

- A bond guaranteeing clean-up of Commission property may be required if such security is determined to be necessary.

Also at the meeting, the Commission selected new officers. The Honorable Donald N. Lacy, Reading, will serve as

Commission President. The Honorable Samuel M. Concilla was elected as Vice President.

In other action, the Commission adopted the following:

- Grants of \$10,000 to the United States Department of the Interior, U.S. Fish and Wildlife Service, to develop and fund a multi-state fish passage technical assistance project; \$25,617.70 and \$19,000 to Kinzua Fish and Wildlife Association and the Seneca Chapter of Trout Unlimited, respectively, under the Pennzoil Exploration and Production Company settlement; up to \$75,000 annually for five years to the U.S. Fish and Wildlife Service for Conowingo Dam west fish lift operation and tank spawning of American shad; \$40,000 to the Pennsylvania Fish and Wildlife Cooperative Unit; and up to \$2,000 annually for five years to the Great Lakes Fishery Commission for the purchase of fisheries acoustic equipment.

- A recommendation that the Executive Director be granted authority to establish the date(s) for Fish-for-Free Days and/or locations for such on an annual basis.

- Changes to some water designations under various special regulations: shortening of the Selective Harvest Area on Codorus Creek, York County, because of landowner concerns; removal of Big Bass regulations from Trout Run Reservoir, Berks County; change of lakes Redman and Williams, York County, from Conservation Lake designation to Big Bass designation; addition of Hunters Lake, Sullivan County, and Lily Lake, Luzerne County, to the Late Winter Extended Trout Fishing Program; addition of Lily Lake, Luzerne County, and Shawnee Lake, Bedford County, to the Big Bass Program and designation of a one-mile stretch of South Branch, Tunkhannock Creek, Wyoming/Lackawanna counties, and 1.8 miles of Chest Creek, Cambria County, under Delayed-Harvest, Artificial-Lures-Only regulations.

- A statement of policy on promulgating special boating regulations on lakes with no public access.

- Revised the limits of the Big Bass area at the confluence of the Susquehanna and Juniata rivers from the mouth of the Juniata upstream to the Route 11/15 bridge near Amity Hall.

- Disposition of 2.5 acres of land to

PennDOT for a highway project in Benner Twp., Centre County; disposition of 2.13 acres of land near Canonsburg Lake, Washington County; acquisition of a 1/3-acre plot along Little Shamokin Creek in Rockefeller Twp., Northumberland County; and confirmation of a notational vote authorizing a land exchange agreement at Frankford Arsenal in the city of Philadelphia.

In Final Rulemaking, the Commission approved the following:

- Maintaining of nighttime slow, minimum height-swell speed limit on Harvey's Lake, Luzerne County.

- Banning of all personal watercraft on Laurel Lake, Susquehanna County.

- Regulation of Letterkenny Reservoir, Franklin County for electric motors only.

- A year-round open bass season on Lake Erie with a reduced harvest (one bass 20 inches or greater) from the statewide opening of trout season to the statewide opening of bass season. No tournaments would be allowed during this period.

Action on a proposed no-wake zone on the Delaware River near New Hope, Bucks County was tabled, as was a new fee structure of dredging permits.

The Commission also approved publication of a notice of Proposed Rulemaking from the following:

- A regulation that specifies parents, guardians or the boat owner is responsible for ensuring youth operators follow boating regulations.

- A regulation that would specify that required certification devices be carried by operators.

- A regulation that would limit the operation of boats on Stone Valley Lake, Huntingdon County to electric motors only.

- Proposed amendment of minimum length limits on Conowingo Reservoir to 24 inches for northern pike, 15 inches for walleyes and 36 inches for muskellunge. A one fish daily limit is proposed for muskellunge as well.

- Amendments to regulations governing commercial trap nets.

- Codification of the requirements for fishing license issuing agents.

In the course of its agenda, the Commission also approved several technical amendments and language clarifications applying to certain existing fishing and boating regulations or proposed rulemaking. —Dan Tredinnick.



Pennsylvania Fish and Boat Commission meeting July 20-21 in Mechanicsburg

Commission
President
Howard "Gary"
Pflugfelder (left)
congratulates
Commissioner
Donald N. Lacy,
newly elected
Commission
President



Bureau of Law Enforcement Director Edward W. Manhart (right) receives a National Water Safety Congress Award of Merit from Commission Executive Director Peter A. Colangelo. Manhart was commended for his dedication to boating law enforcement and safety training of Commission officers.



Commissioner William J. Sabatose (right) was named "Man of the Year" by the Susquehanna Smallmouth Alliance. Sabatose, who chaired the agency's Fisheries Committee, received the award for his part on the agency action to extend "Big Bass" regulations on the Susquehanna River from Harrisburg to Sunbury.



Four representatives of River Rescue of Harrisburg also receive a National Water Safety Congress award for that organization. River Rescue was lauded for its work with Commission rescue training programs and for patrols on the Susquehanna River.



Commission Executive Director Peter A. Colangelo gives Dan Martin a Special Project Award for Martin's role in developing the Commission's Fishing and Boating Map. Martin is acting boating program manager.

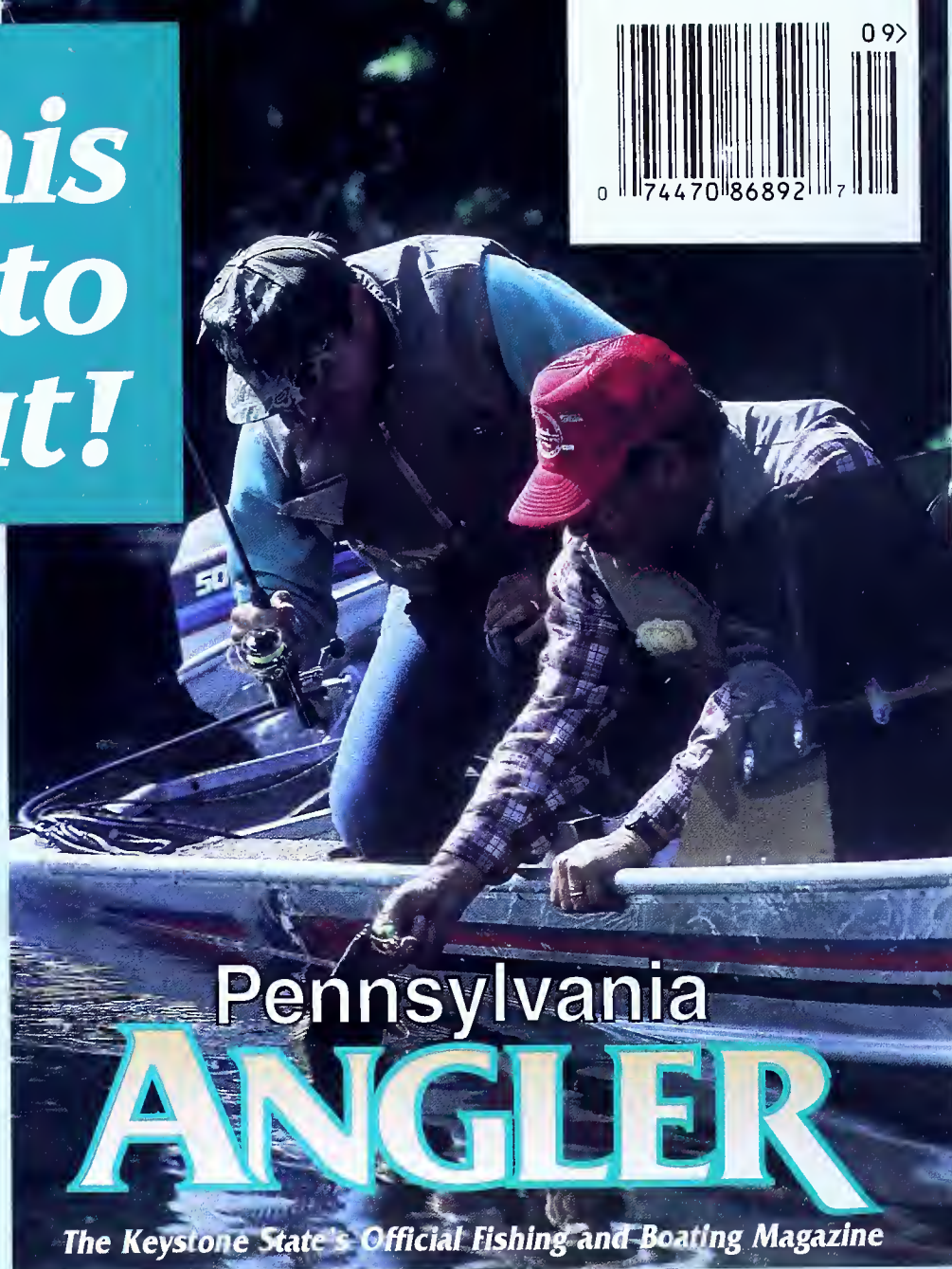
Bill Hartle, Commission Northcentral Law Enforcement Region Assistant Supervisor, representing the Conservation Officers of Pennsylvania Association (COPA), presented the Commission with \$1,000 for use in the agency Conservation Acquisition Partnership (CAP) program. The CAP program accepts tax-deductible donations for a fund earmarked for the purchase of riparian property for public fishing and boating.



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RESOURCE FIRST

Listening to the Customer

Like any "business," the Fish and Boat Commission has to stay in touch with customer satisfaction and changing product demands, and identify new "markets." The Commission has undertaken extensive survey efforts to accomplish this.

The Commission conducted a series of nine public workshops across the state in 1994 (see the August 1995 *Angler* "Straight Talk"). Workshops of this type are useful for identifying issues, but they don't provide a complete "picture" of all the issues and customer needs. Statistically valid surveys are the instruments of choice in this endeavor. The Wolf Advisory Report, funded by the Pennsylvania General Assembly, provided a comprehensive management review of the Commission, and strongly urged the Commission to complete an updated survey of our customers.

Recently, the Commission embarked on a customer survey. The primary purpose was to assess angler and boater knowledge and support for Commission programs and support for alternative funding mechanisms. The Commission executed a contract with Responsive Management, a firm specializing in fish and wildlife survey research, in early May 1996. Preliminary survey results were provided at the Commission meeting in July.

These results showed that the overall performance of the agency is on track with nearly 80 percent of all respondents rating the Commission's performance as good or excellent. When respondents were asked about their satisfaction with specific agency programs, similar high marks were awarded. For example, 71 percent of resident angler respondents were satisfied or very satisfied with the Commission's efforts to monitor and manage the state's recreational fish populations, and 78 percent of resident anglers were satisfied or very satisfied with fishing access.

This does not mean the Commission can sit back and rest on its laurels. There are always improvements that can be made as we strive to continuously improve the "products" the Commission provides to anglers and boaters. When PA anglers and boaters were asked which program areas they would like the Commission to spend more effort on, both identified protecting habitat, education and managing the Commonwealth's fisheries as their top three choices, in that order. Angler and boater opinions probably are not very different because 79 percent of boater respondents own their boats primarily to "fish and boat" or simply to fish.

When resident angling respondents were asked what their main reason for fishing is, they identified for relaxation

(54 percent), for the sport (20 percent) and to be with friends and family (13 percent) as the top three reasons. Only a combined 6 percent of resident angling respondents indicated that catching fresh fish, catching large fish or catching many fish was their main motivation.

Another area the survey investigated was support for funding alternatives, some of which were identified in the public workshop process. There was nearly a 70 percent or more support rating from resident anglers for fishing tournament fees, fees for Commission-offered classes and clinics, and a voluntary junior licence. There was considerably less support (38 percent) for a required junior license.

A final highlight of this survey that you may find interesting is that nearly 60 percent of registered boat owner respondents and 70 percent of resident angler respondents support a mandatory boating education course for people who operate motorboats in Pennsylvania.

Another recent survey, funded as part of a Wild Resource Conservation Fund project, showed that overall Commonwealth citizen support for legal fishing is very high—95 percent approval. In addition, 98 percent of anglers surveyed indicated that restoring and improving habitat is an important Commission function. Ninety-six percent of respondents also indicated that managing and conserving endangered fish and wildlife is an important Commission function. These two results show a strong conservation and stewardship ethic among Commonwealth anglers. This is something we would like to continue to build.

Other recent survey results show that only 39 percent of the Commonwealth's citizens (18 years and older) have never fished. This means that many people receive introductory fishing experiences, but few become the one out of 10 citizens who buys a fishing license and fishes as an adult. The Commission is very interested in improving the recruitment of new anglers, especially in light of the aging state population (20 percent of the state will be 65+ by the year 2000) and recent declines in license sales.

Added together, all these numbers equate to a clear conclusion: You like where we have been and what we have done, and you have even higher expectations for the future. It is our job to meet your expectations where it is in the best interest of the resource and all resource users. This creates many challenges, but these are challenges we are willing to take on with guidance we solicit from Pennsylvania anglers and boaters.

Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

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Pennsylvania ANGLER

The Keystone State's Official Fishing and Boating Magazine

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Difficult Launches and Retrieves on PA's Rivers <i>by Art Michaels</i>	4
Medix Run Rivalry <i>by Gregory J. A. Moore</i>	7
Telling on the Tully <i>by Vic Attardo</i>	8
1997 Seasons, Sizes and Creel Limits	16
On the Water with Robert L. Petri	18
PA Fish & Boat Commission Publications List	19
Fish Scale Sketch of the Pennsylvania Fish & Boat Commission	23
Water Pollution <i>by John A. Arway</i>	25

This issue's front cover, an angler on Harris Pond, Luzerne County, was photographed by Barry & Cathy Beck.

Added value to your PA Angler

I hope you notice a few things in this issue: The "1997 Seasons, Sizes and Creel Limits Poster" on pages 16-17, the "Fish Scale Sketch" article on the Commission on pages 23-24, and the 8-page water pollution article beginning on page 25. These items would probably not have appeared in *PA Angler* before. We would have produced them separately as special publications, requiring anyone who wanted them to spend time and money to get them. This different approach adds value to subscribing to *PA Angler*. We now print certain special publications in the magazine and reprint them so that we have separate supplies. *Angler* subscribers now receive these publications as part of *Angler* issues. You probably also noticed the PLAY (Pennsylvania League of Angling Youth) newsletter in the September issue, and in November you'll see the fall installment. This special item is produced in addition to the magazine, adding eight pages.

So we either add pages to the *Angler* or include special publications as part of an issue. In addition to adding value to the magazine, the Commission saves money this way by printing extra copies of these publications when we print the magazine, instead of printing special publications separately.

The new *Pennsylvania Angler & Boater* magazine, which we'll begin printing in January 1997, will have 64 pages per issue, twice the size the *Angler* is now. This option will let us broaden and deepen our coverage considerably. That means that we'll print more articles and special publications in each issue on a wider range of topics than we do now in 32 pages.

We're excited about the possibilities, and we have some excellent materials planned. Stay tuned!—*Art Michaels*.

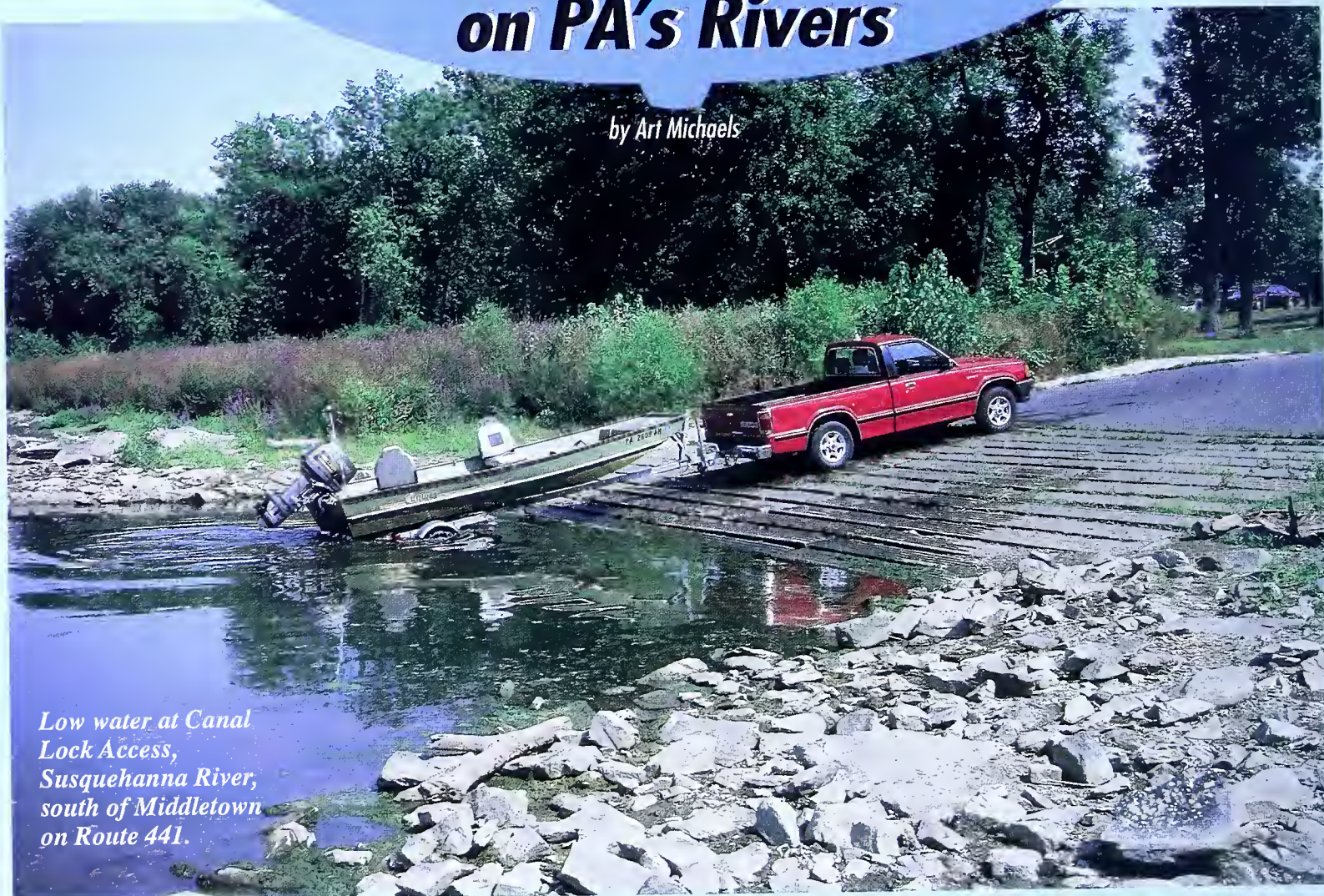


DIFFICULT

LAUNCHES AND RETRIEVES

on PA's Rivers

by Art Michaels



Low water at Canal Lock Access, Susquehanna River, south of Middletown on Route 441.

Backing your rig down the perfectly angled ramp, pushing your boat into the calmest water, and retrieving your boat with ample help in windless conditions is every angler's dream. Nevertheless, a dream-like launch and retrieve can be your worst nightmare if you lack confidence and skill in handling your rig. Even in perfect conditions, successful launching and retrieving depend largely on expertly maneuvering your tow vehicle, trailer and boat, and competent seamanship—knowing how to steer your boat precisely at the correct speeds in a variety of retrieve conditions.

Difficult launches and retrieves—in high water, low water, strong current and stiff cross-winds—are the ultimate challenge for anglers who trailer their crafts. Changing river levels complicated by stiff cross-

winds make launching and retrieving especially challenging on Pennsylvania's rivers.

The most important consideration is safety. When you can't launch your boat safely, just don't, or go to another waterway where conditions are better. Don't risk your safety, your partners' safety, and the investment you've made in your rig on in iffy launch.

Successful launching and retrieving depend largely on expertly maneuvering your rig and on competent seamanship.

High water

In high water, our state's ramps practically disappear. The most important aspect of difficult launches and retrieves is your trailer. A drive-on trailer is the easiest trailer for launching and retrieving in rough conditions. For the most part, to retrieve you just get the bow between the ends of the bunk guides and the boat's pretty much on the trailer.

In high water a tilt-trailer might also be beneficial. A tilt trailer's tongue has a hinge that lets the back part of the trailer tilt toward the water. This means that you don't have to back the trailer as far down a ramp as you would without a tilt mechanism.

In high water it's also important to scope out an access. Make sure you know exactly where the ramp is, and be sure to

launch and retrieve in the middle of the ramp. Posts and other markers at the bottom edges of the ramp can be submerged, and you don't want to back into one of them or hit one with your boat.

Sometimes in high-water conditions the water is muddy and you can't see what's in the water at the ramp. In one situation like this anglers have rigged a fishing rod, tied on a jig, and cast around the ramp just to get an idea of the ramp's depth and steepness.

Low water

Low water can turn a moderate ramp into a dangerously steep one. In low water the end of the ramp might be exposed. You have to back your trailer farther down the ramp than you would usually. But the ends of some ramps have deep gouges dug by anglers who've gunned engines to drive their boats onto trailers or maneuver them at the ramp.

High water and swift currents can also dig holes at the ends of ramps, deposit obstacles and debris, and carve the bottom away from the ends of concrete ramps.

However, low-water launches bring your rig closer to these otherwise hidden trouble spots. In high water and in more normal conditions you'd launch with your trailer tires safely out of range of these places.

Be careful not to hang your trailer axles at the end of the ramp in these holes. Driving the axles into one of these holes causes a lot of trailer damage and requires a tow. What happens

is that the biggest dropoff is in the center of the ramp. If the ramp is a double, where two boats can launch, use the other ramp or launch on the side of the ramp.

Low water can also create a wide expanse of skinny water near the ramp that's too shallow for an outboard and even an electric motor.

Suppose you have a 25-horsepower engine on your bass-type boat without power trim and tilt, but you have a bow-mounted electric motor. Even when it's

Your Boat Plug and That SINKING Feeling

Have you ever forgotten to put in the boat plug when you launched your boat? The mistake has never cost most boaters anything more than wet feet and a little embarrassment after scrambling to plug the hole. Still, this seemingly trivial detail has cost boaters' lives, so make sure you take care of this concern, especially when you're preoccupied with a challenging launch.

Find ways to remind yourself to put in the boat plug before you launch. However, if you forget, the worst procedure is to panic and do nothing.

After you launch and you notice that water is pouring in through the plug hole, if you can quickly put in the plug, do so and bail the water out of the boat. It pays to store your plug in a stern fender hook. The plug is more visible then, and this placement helps remind you to put it in as you prepare to launch. If you forget, this placement also makes the plug immediately accessible. You might also want to carry the plug with your ignition key. You'll know immediately that you forgot to put the plug in if you attempt to start the boat motor with the plug attached to the key. Keeping the plug with your trailer lock key might also help you remember to put the plug in before you launch.

What if your boat's bilge is hidden by a deck and you can't easily reach the plug hole? If only a little water has entered the bilge before you notice the problem, beach the boat. Then plug the hole and bail, or turn on your bilge pump, if you have one.

If you can't run the engine and bring the boat on plane, plug the hole and set the anchor to hold your position. Then bail or turn on the bilge pump. The built-in flotation of most boats keeps even swamped boats afloat.

If you launch and discover that the hole isn't plugged and that you have no plug, beach the boat. This minimizes the amount of water you take on.—AM.



Sandt's Eddy Access, Delaware River, about five miles north of Easton on Route 611.

almost too shallow for the electric motor, just pull the cord to hold the motor up a bit and guide the boat onto the trailer using the electric motor. When the water is too shallow even for the electric motor, you may need a push pole. You can make one with 2 1/2-inch PVC pipe and when you need to, pole the boat over skinny water to the ramp.

You can make a push pole any length and use just about any diameter PVC pipe. The 2 1/2-inch diameter pipe with a "T"

end works well because the pole then has enough surface area to use in soft mud.

If the ramp is shallow in low-water conditions and you have to back far down the ramp, you might have to get wet. Carry boots with you for this possibility.

In some shallow launching and retrieving situations, you can use a length of rope of about 30 feet that has a swivel eye snap on each end. To launch your boat, hook one end to the winch stand and the other end to the bow eye. Launch the boat by

hitting the two vehicle brakes, which sends the boat gently into the water. Once the boat is floating free of the trailer, pull the rig out very slowly and bring the boat forward. When your tow vehicle and trailer are clear of the water, step out of the tow vehicle and pull the boat onto the beach or shoreline next to the ramp.

Shortening the rope with a loop knot gives him more con-

DIFFICULT LAUNCHES AND RETRIEVES on PA's Rivers

trol at ramps where the boat might float around trees, rocks and other obstructions, or where a swift current might take the boat.

Check out a ramp carefully in low water situations as you would in high water. In low water, when most of the ramp and shoreline are exposed, check for soft spots in the gravel, sand and mud, and see if algae is growing on the ramp. The greenery could make walking on the ramp dangerous, and it could create slippery conditions for your tow vehicle's back tires, which can make driving away difficult. A tow vehicle like a 4-wheel-drive truck makes you better prepared to negotiate soft and slippery low-water ramps.



Guide-ons can help you center your boat on the trailer during retrieval.

Currents, cross-winds

Retrieving your boat in strong winds and currents is mostly a matter of good seamanship and boat handling. People get into trouble in strong winds and currents because they're in too much of a hurry to launch or retrieve. To retrieve your boat in a strong wind or current, you have to use the wind or current to your advantage. Head the bow into the current or wind, and at the last second, angle the bow toward the trailer very slowly. If you miss, try again. Don't hurry these maneuvers—that's when you compromise safety and your rig sustains damage.

Trailer Accessories

Difficult launches and retrieves can be made easier with the help of some extras. All of these accessories are available at marine dealers and marine supply catalogs.

- **Guide-ons.** These items include roller guides, bunk guides and trailer positioners. They help you find the center of the trailer when retrieving your boat. Most mount between the wheels and the end of the trailer, and a portion remains above water. Some guide-ons add a measure of safety on the road, holding the boat on the trailer if your gunwale strap or other tie-down measure fails. Prices range from about \$25 to more than \$100 per pair.

- **Guide lights, whip lights.** These items mount on posts or guide-ons (see item above) at the back of the trailer. They're especially useful for retrieval at night, or when your boat is wide and your trailer is relatively narrow. Costs range from a few dollars per pair to more than \$30 per pair.

- **Walk ramp.** This item is a wooden or aluminum plank in various sizes that you secure to the trailer tongue. Most have non-slip adhesive strips installed. A walk ramp lets you make your way down the trailer tongue safer than performing a balancing act on a bare wet, slippery, thin trailer tongue. Costs about \$25.

- **Oar, paddle.** Useful wooden oars for poling and steering range from about 7 1/2 feet to 9 feet and cost about \$15 to \$20. Also available are combinations of paddle and hook and paddle and push pole. Costs range from about \$16 to \$20.—AM.



Low water can expose underwater hazards wherever you launch. Always scout the area before shoving off.

Launching in strong winds and currents isn't difficult if you know your rig well and can handle it skillfully. That's the trick—it's something that takes practice and patience. When you know your rig well and you can handle your boat proficiently, launching and retrieving becomes easier.

Remember, though, that it's unwise to take chances. If the access is plain inaccessible, find somewhere else to launch or wait until conditions improve.

ANGLER

Medix Run Rivalry

by Gregory J.A. Moore

Medix Run was flowing low and clear when I arrived on a warm, late August evening. It had been a spur-of-the-moment trip, and I was depending on my seine to procure a few small baitfish. I obtained several sucker minnows and a hard-shell crayfish, and I began working a shaded riffle with the peeled tail of the crawdad. The shallow flat ran about 30 yards, and I thoroughly worked every break in the rushing current with no response. "Probably fished out," I muttered to myself, as I stood silently studying the stream.

"I thought I recognized your truck," called a familiar voice behind me. I turned and saw my friend, Bill, with a fly rod in his hand. "Any luck?" He asked. Bill was well known locally for his prowess with trout and didn't let my negative reply discourage him from confidently casting a dry fly on a tiny leader into the surging riffle. I was mesmerized as I watched Bill catch and release three small legal trout in that same stretch of stream where I had just struck out.

"You bait guys should just give up this time of year," Bill chided. His smug expression told me he wasn't done yet. "You have to have a knowledge of your quarry and its habits, and adapt your strategy accordingly." He was really laying it on thick.

I knew I'd just been taken to school and wished him more luck, although he seemed to be doing just fine without my blessing.

I forlornly worked my way upstream, repeatedly casting a minnow into likely holding water to no avail. I was desperate at least to get a strike to gain some slight sense of personal vindication. I stopped at the largest pool on Medix and studied the clear water. Even in the diminishing illumination of twilight, it was possible to see the bottom of the deep pool clearly. I noted the total absence of small baitfish. A plan for my redemption was hatching.

A section of swift shallows above the large pool was exactly what I needed. I lifted a large rock in the fastest section and was immediately rewarded by finding a small hellgrammite on the underside. I flicked the black larva into my bait can and gently lowered the rock back into place.

I returned to the pool, rigged a sliding sinker and a splitshot above my hook, and clipped the pincers and tail tendrils from the hellgrammite. Hooking it through its collar, I crept to the water's edge and cast to the head of the pool. The heavy sinker immediately took my bait to the bottom. This was, I knew, a long shot, and I also knew it was going to take a while.

I believed a single large trout inhabited the pool, and I waited for the lengthening shadows to give it the confidence to leave its lair to feed. My bug repellent was losing effectiveness as I watched my rod, but after almost an hour, my line began slowly moving. My line stopped for a moment and I held my breath. The instant it started moving again, I flipped the bail on my spinning reel and set the hook. The fish reacted violently, churning

the water in a noisy panic. I carefully applied pressure against my throbbing fiberglass pole as the line spiraled about the pool.

My quarry began to tire and I worked it in close enough that I could feel it pass my boots as it dashed back and forth across the pool. It was now so dark in the shadows that I could not make out the form of my prize until I carefully beached it, exhausted, on the low rocky bank.

This was definitely a keeper. Its thick, fleshy sides looked as if they were covered with brown poker chips. Almost 21 inches long, it was the largest brownie I had ever pulled out of Medix. I headed back to my truck with the big fish. I hoped to find Bill and torment him a little with my trout. After all, "A joy shared is a joy doubled."



Disappointed to see that Bill was gone, I loaded my prize and gear into my truck, and started out the dirt road. A quarter-mile down the lane I made out the outline of Bill's ancient Scout parked along the stream in a gas well site. I stopped a bit farther down the road, grabbed my trout, and galloped to Bill's vehicle. I threw my fish on his hood and hid in the nearby bushes waiting for the fun to begin.

It was pitch black by the time I heard Bill coming out of the streamside brush, and he immediately burst into a litany of expletives. I nonchalantly walked over to him.

"Excuse me, Bill, I hope you didn't mind my setting my fish there for a few seconds. I didn't want a raccoon to get it, and it was so darn heavy to carry." Bill was still staring open-mouthed at the trout, so I kept rolling.

"You know, Bill, sometimes you have to focus your technique to the exclusion of the numerous smaller prey you might catch to obtain a fish worthy of your efforts. Just a matter of personal discipline, I guess."

Bill just stood by his truck, uncharacteristically mute, staring after me vacantly, as I walked down the dusty Medix Grade road in the dark, lugging my fish. I doubt he could make out my grin.



Telling on the Tully

by Vic Attardo

Good urban streams that offer a bit of serenity as well as reliable year-round fishing are hard to come by. But the Tulpehocken Creek, running through the city of Reading in central Berks County, gives the angler both of these needed countenances, and more.

"The Tully," or "The Tulip," as its friends know it, is a tailwater stream garnered from the waters of Blue Marsh Lake. Below the bottom-release spillway there are over four miles of special-regulation water followed by several more miles of approved trout water before the stream enters the Schuylkill River.

The special-regulation area is stocked with trout, but not with adult fish. Through the efforts of the Tulpehocken Chapter of Trout Unlimited, the stream receives a generous supply of fingerling rainbows and browns. In addition, there are beautiful wild browns in the Tully—for me, the stream's real prize.

Nearly every day of the year, from spring through winter, you'll find fly fishermen wading some of the more accessible portions of the stream. The area around Rebers Bridge and the first half-mile below the dam are particularly popular areas. And even though few places on the Tulip are left unattended during the high season, there are spots that receive very little attention outside the April-to-June rush.

In addition, away from the special-regulation zone, you may not see another angler from November through February. But I know from experience that there are fish in these little-fished places.

There's an old saying in our sport, that 10 percent of the fishermen catch 90 percent of the fish, and I've also come to believe that 10 per-



*Plum Creek area,
Tulpehocken Creek*



Isonychia patterns, caddises, tricos and terrestrials are good bets to fool trout. Before you hit the Tully, check the hatch chart on page 11.

cent of the water holds 90 percent of the fish. This is certainly true of the Tully, particularly during low water. The nice cuts and riffles that are chock full of fish in spring's high water conditions can be fishless from July through September. To be successful during the low water months, anglers should search out the deepest pockets and runs.

Below the spillway, there's a large sluggish pool where walleye anglers gather in late winter. Just below the pool is the first manmade deflector and the start of the special-regulation water that permits lure and fly fishing.

This part of the Tully is over 60 feet wide and except for the deflectors has a rather featureless substrate. On the south side of the stream, the bank is wide and flat and often floods in high water. I've seen hundreds of dead alewives along the upper portion of this bank, fish that came through the dam and were deposited on the high-water line. The opposite bank is a nearly vertical ridge that holds the Tully's waters in tight. You would need mountain climbing gear as well as waders to access the stream from this side.

For the first 3/4-mile below the spillway, the bottom of the stream is heavily silted—"muddy" might be a better term. Entering the water from the flat bank, you'll

find a couple of sudden step-offs into deep water, depending of course on the overall flow. Aside from the deflectors themselves, there are very few rocks or boulders amidstream. The deep water, where trout are likely to hold, is behind the deflectors and against the far bank.

Working your way downstream to the Western Berks Water Authority Plant, the Tully runs straight and true. It is near the plant that the number of fish-holding rocks and obstructions begins to increase. From the plant to the first big curve, the Tully is a series of short riffles and long pools. Around the plant itself, there's a wide pool with a mid-stream current.

Below the municipal plant, the Tulip is tightened by a high, steep cliff. Not surprisingly, this zone is referred to as the "Palisades," and it contains some fast center-stream riffles with some deep cuts below the fast water.

From the plant to Rebers Bridge is about 3/4-mile as the crow flies. West of the bridge the road climbs up a long hill and there's a wonderful view of the Tully from the heights. But to access this part of the stream you should be on the south side of the creek and park at the Palisades lot. Walk down a well-worn path, a miniature gully, to reach the first good riffle and a wonderful tailout. This is some of

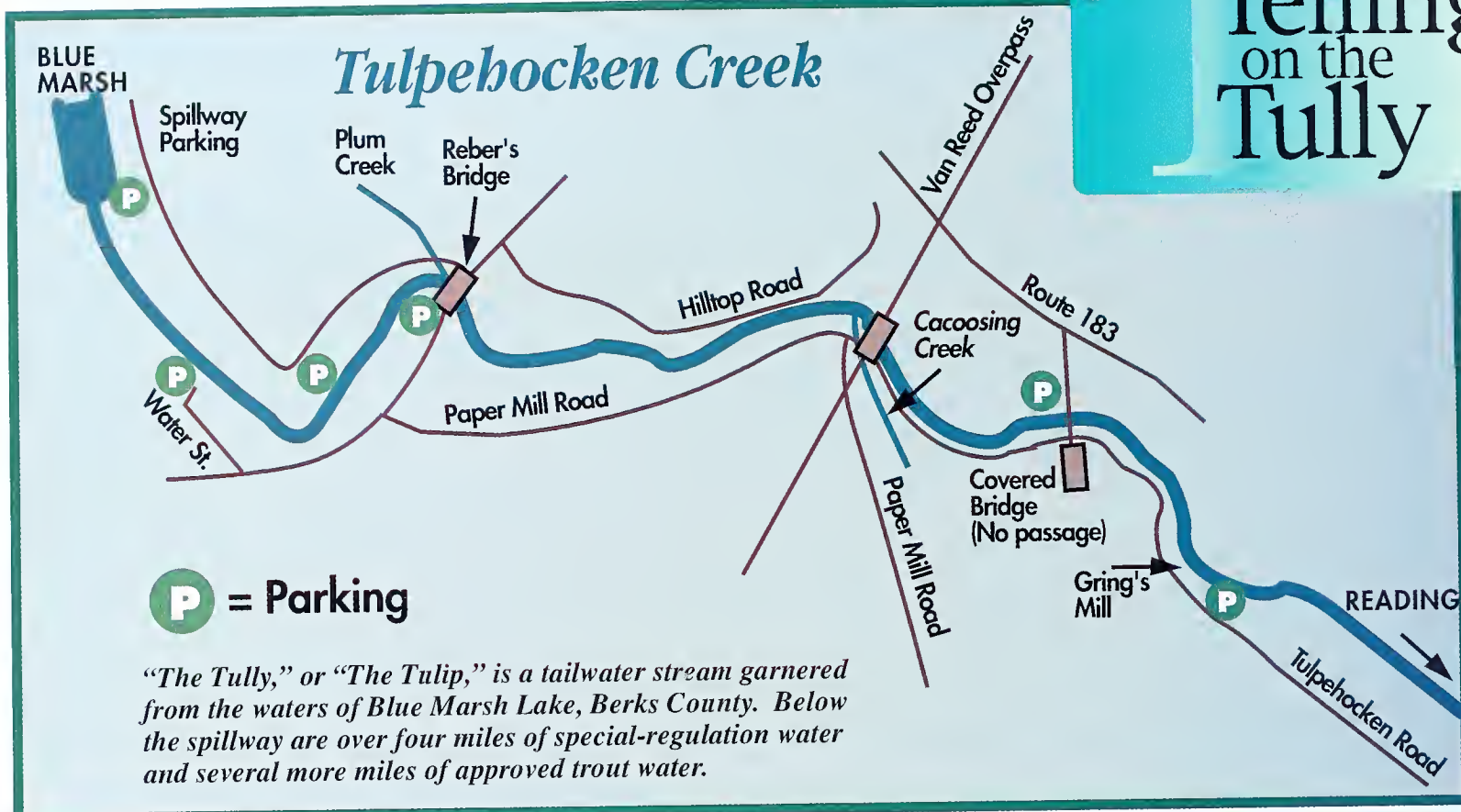
the most picturesque water on the stream. You won't be bothered by the sound of passing cars in this area, only the *swish* and *swoosh* of fly lines.

Follow the true path

Farther downstream, Rebers Bridge is probably the most popular spot on the Tulip. A large parking lot and easy accesses concentrate fly and lure anglers in this section. The bridge itself is one of those metal grated surfaces with no asphalt base. Out in the middle of the bridge you can look right down into the water, which is a really wonderful experience for fishermen with vertigo. I mention the construction of the bridge because I don't recommend wearing your spiked waders across it. I saw a guy take a flying fall on the grate and it wasn't pretty.

Upstream from the bridge anglers like to wade about 10 feet out from the shoreline and work weighted nymphs in the deep water beyond them. The most common tactic is the lift-and-drop technique that lets the angler swing his fly in front of him like a bullfighter sweeping his cape. I see many guys doing this celebrity-induced tactic, but I rarely see them taking trout with it.

Below the bridge the stream makes a hard curve and breaks apart with a little island off to one side. At this point Plum Creek enters the Tully and some interesting currents and eddies are formed by the tributary addition. There anglers like to



practice a basic down-and-across approach as they work the rustling water. It's also a good spot to work subsurface midge patterns. The trout lie in wait between the breaks and are very careful feeders.

Below the bridge, the Tully turns away from the road, but a recreational path skirts the stream from there on down. The angler who parks at Rebers and follows the trail downstream can find some additional elbow room.

The bike-and-joggers trail abides by the old Union Canal. The canal is abandoned, of course, except for frogs and the occasional pair of mallards. The land between the canal and the stream is thick with brush and stickers and there are only one or two side paths to take you to the water. But about a half-mile down the bike trail, you'll run across an old lock and an opening to the stream. This entire area, from Rebers Bridge down to the lock, is marked by moderately fast-moving pools with a number of nice riffles mixed around a pair of small islands. To work the area between the grated bridge and the lock in summer when the brambles are thick, walk down to the lock, get on the water and then head upstream.

Between the Union lock and the connection with Paper Mill Road on the north side of the stream, the Tully expands to over 100 feet wide in some places. No northside road runs close to the stream along much of this section. However, the

bike path still follows the south side of the stream and Hilltop Road skirts the stream for some distance. It's about a mile from Rebers Bridge to the Paper Mill Hole.

A trail of paper

Where Paper Mill Road strikes the Tully, there's parking for a few vehicles and it is here that the Cacoosing Creek enters the main stream. This is another popular spot and rightly so. The currents created by the Cacoosing tributary, and sometimes the warmer water in early spring, really spark the stream from there to the Van Reed Blvd. overpass. A number of good riffles and runs are concentrated in this zone as the stream makes a couple of hard turns. At the paper mill parking area there's a deep tailout that is worth fishing.

From Paper Mill Road the Tully connects with Tulpehocken Road and an increasing number of access sites. It's another

mile from the Paper Mill Road intersection to the covered bridge and the end of the special-regulation water. This happens to be some of my favorite water on the Tully. Before passing under the elevated Van Reed overpass, the stream is a tight series of riffles and pools with plenty of rocks and fallen trees where trout love to lurk. Both sides of the shoreline are generally flatter through this stretch, but there are some areas where the north side is bordered by short, steep slopes. Beneath these slopes, fishing the shadowy banks is a real necessity. It's been my experience through this zone that larger fish hang about the deeper waters off the steep banks, while the smaller trout lie near the shallow bars on the opposite shoreline. You may find it different.

You can fish under the Van Reed overpass where the Tully suddenly narrows, or you can make your way closer to the covered bridge where it again widens and deepens.

If you happen to be on the north side of the stream, Hilltop Road comes in to parallel the Tully for some of its trip to the Schuylkill. Hilltop offers a limited number of pull-offs that anglers share with bikers and joggers. But the lot at the park on the north side of the covered bridge offer the best access from Route 183.

As noted, the special-regulation water ends at the covered bridge, but even if you're a fly fisherman, that doesn't mean

Good urban streams that offer some serenity as well as reliable year-round fishing are hard to find. Tulpehocken Creek gives the angler both of these needed countenances, and more.

your angling opportunities should end there.

Directly below the covered bridge you'll find a number of good bends with sharply flowing riffles. It's another mile from the covered bridge to Grings Mill and a large parking area. Just above the mill you can walk along the south shore to a wide and very deep pool, just the sort of place where wary browns feed on selective hatches. Below the dam and the gate house at Grings Mill you'll find another series of riffles and runs. The bank on the south side of the stream is difficult to traverse, but you can cross the foot bridge at Grings Mill and again strike the recreational path. From the path, access is difficult because the bank drops off quickly, but you'll find a few places where you can climb or slide down. After that the Tully is pretty much in Reading proper as it enters the Schuylkill River near Route 222.

What to fish

Probably my favorite hatch on the Tully is the green caddis, which comes off during May, with the first two weeks of the month usually prime. I always like to ask local anglers what their favorite hatch on their stream is, and the green caddis hatch is far and away the most loved on the Tully. Anglers fish with a deer hair or elk hair pattern and an X-wing caddis, which includes a trailing shuck of Z-lon. A soft-hackle wet fly with a bright-green body and a partridge collar is my favorite emerging pattern. Even though I've had trout late into this hatch refuse a dry, because they've seen so many fakes, I can take the same fish on the soft-hackle fly fished down and across with a slow, lifting motion on the arc.

Mayfly and caddis hatches always get the press, but the Tully is a good place to work streamers and also to imitate the sucker spawn of early spring. Blue Marsh Lake has a population of alewives, and just as the Delaware River has a reputation for producing good fishing when the alewives are swept through Cannonsville, so do Tully trout get a hankering for alewives when the hatches are over. I routinely use bright streamers in silver or gold, depending on water color.

In addition to streamers, Tully trout take large black or brown stonefly nymphs in the colder seasons, and don't forget to try egg patterns when the rainbows are spawning.

The Tulpehocken is not a perfect trout stream. Few, if any, streams in the southeast corner fit that description. But the Tully is a wonderful piece of water in what might have been a wasteland of urban development. Where the Tulip stumbles, it does so with all the problems of a modern creek, but where it flourishes it shows a large, bright bloom.



Tulpehocken Hatch Chart

FEBRUARY

Midge	22-26	All month
Blue-Winged Olive	20-24	Late Feb.
Little Black Stonefly	16	Late Feb.
Caddis Larvae	10-12	All month

MARCH

Midge (olive green)	22-26	All month
Blue-Winged Olive	20-24	All month
Little Black Stonefly	16-18	All month
Crane fly	14-16	Late March
Caddis	16-18	Late March

APRIL

Crane fly	14-16	All month
Blue-Winged Olive	16-18	All month
Midge	22-26	All month
Blue Quill	14-18	All month
Pale Olive Caddis	16-18	Mid-April
Tan Caddis	16-18	Mid-April

MAY

Yellow Crane fly	14	Early May
Green Caddis	16-18	All month
Caddis (various)	16-18	All month
Sulphurs	16-18	Mid-to-Late May
Gray Fox	12-14	Mid May
Light Cahill	14	Mid-to-Late May

JUNE

Caddis (various)	16-18	All month
Light Cahill	12-14	All month
Sulphurs	16-18	All month
Yellow Drake	12	Late June
Trico	24-26	Late June

JULY

Caddis	18-24	All month
Sulphurs	16-18	All month
Yellow Drakes	12	Early July
Trico	24-26	All month
Cream Midge	24	All month
Terrestrials	(various)	All month

AUGUST

Caddis	18-24	All month
Cream Midge	24-26	All month
Tricos	24-26	All month
Terrestrials	(various)	All month

SEPTEMBER

(same as August)		
Olives	18-22	All month
Flying Ants	18-22	All month

OCTOBER

(same as August)		
Isonychia	12-14	until frost

NOVEMBER

Caddis	16-20	until heavy frosts
Olive	18-22	until frost
Trico	24-26	until frost

Notes from the Streams

Mistaken identity

Recently, the aging bridge spanning the Juniata River near Thompsettontown in Juniata County was replaced with a new concrete structure. Part of this new construction included new pavement on the sections of roadway leading to the bridge on either side. This new pavement was very black in comparison to the older, grayer pavement.

During a heavy hatch of light-tan mayflies on the river, I observed tens of thousands of these insects attempting to lay their eggs on the new pavement instead of the surface of the river. The dark pavement apparently appeared as water to the insects. The line where the old and new pavements met was also the end point to this misguided egg laying by the mayflies, the lighter surface of the old pavement not appearing as water.

Even though this is probably not an earth-shaking discovery that might mean the eventual doom of the mayfly because of its confusion in determining water from black asphalt, one might consider using a lighter colored pavement when building or repaving roads adjacent to streams with such insect hatches.—WCO Larry Baker, Juniata/Mifflin counties.

A rose by any other name

On becoming a full-time employee of the Fish and Boat Commission's Bureau of Law Enforcement in 1988, I received the official title of "Waterways Conservation Officer." The following is a sample of additional titles (those that are fit to print) bestowed on me by some of my contacts in the field and on the water-warden; fish warden; boat warden; game warden; fish and game warden; ranger; forest ranger; park ranger; fish police; policeman; trooper; cop; fish cop; boat cop; waterways patrolman; lake patrol; marine police; sheriff's department; DER; DEP; ossifer; trout trooper; minnow master; carp cop; fish fuzz.

Many titles, still only one paycheck.—WCO William Carey, Wallenpaupack.

From cadet to officer

We, the 13th Class of Waterways Conservation Officers, are finished with our training. For the past 10 months we have been away from our families and have been involved in multi-faceted training. Such things as qualifying with a firearm in two inches of mud and a blinding snowstorm, being sprayed with oleoresin capsicum

spray, and cold-water exposure in Bald Eagle Creek, left one cadet saying, "Did we sign up for this?"

Everything came into perspective one sunny afternoon in Venango County with WCO Bob Steiner. We spent the morning patrolling the Allegheny River by boat. In a remote area we observed four bald eagles and stopped the boat to have lunch. As I reached for a sandwich, Bob leaned back and said, "Take a look around, Joe, this is your office!"

On June 21, 1996, at 11:00 a.m., the members of the 13th Class of Waterways Conservation Officers graduated at the Capital building in Harrisburg. As the Honorable Michael Eakin gave us the oath of office, I glanced at my classmates. During the past 10 months I had made several good friends, played a practical joke or two, and learned and experienced much to prepare me for my career as a Waterways Conservation Officer.—WCO Joseph Morris.

With progress comes danger

Some years ago the Fish and Boat Commission began using jet-powered outboards on patrol boats in districts having shallow water areas to patrol. This type of propulsion allows much easier access to waters of four to five inches in depth. This is very important when patrolling rivers and large streams by boat. Before, these waters were accessible by either canoe or gingerly operating small boats with small outboards attached. This process was slow and all too often not very practical. The outboard jet now permits much better coverage in these areas.

Many fishermen are switching to these craft after seeing its usefulness. While the jet has been a boon to fishermen, it has also increased the potential for serious accidents. Instead of the 2- to 3-mile-per-hour speeds of the past that during a collision with another boat required nothing more than an apology, we now are experiencing speeds of 25 to 30 miles an hour in these new jets. Much more care must be given to thoughtful operation of these craft. This is especially true at night, when a matter of a second or two can mean the difference between a serious accident or a near miss.

Boat lighting is extremely critical now. It's required legally but it was never too serious a need on rivers where boats could hear one another's approach 5 or 10 min-

utes before an encounter. All boats are going to be more carefully scrutinized for proper lighting in my district. The potential for accidents is greater because of the increased use of the outboard jet. Fishermen using boats of any type should make sure they meet legal lighting requirements when they cast off for an evening of river fishing.—WCO Larry Baker, Juniata/Mifflin counties.

Nothing better to do

Last May while stocking Starrucca Creek, a fellow officer radioed the description of an angler who had left with his limit of trout, only to return a short time later to the same location. The individual proceeded to fish, taking five more trout. When I stopped the gentleman, he said he had just retired and had too much time on his hands.—WCO Bryan Bendock, Susquehanna County.

River Rat Ray to the rescue

Everyone knows that a river rat is a hardcore fisherman who likes nothing better than a day on the river with the fish biting and a cold drink to quench his thirst. This particular river rat is no different—he's been fishing the Susquehanna River for more than 40 years and knows every rock and likely spot to reel one in. Although River Rat Ray prefers a quiet day on the river, he occasionally gets involved with heroic efforts that go unrecognized, sometimes not even with a thank-you.

Such an occasion happened last July while he was heading up the river. To his surprise, he came across two big men and a scrawny younger man in the middle of the river. While big men are not unusual on any river, it is a bit out of the ordinary when they float by you hanging from a canoe. Although there are a lot of people who would not want to get involved, River Rat Ray went to the rescue. He pulled over so they could board his boat.

One at a time they awkwardly strained to enter the boat. Ray held his breath as large, chubby legs entered his boat, allowing water to spill in with one large appendage after the other. Then, in swung the younger one, still dazed by the whole experience. There they sat—Larry, Daryl and Daryl. They weren't men of many words or common sense. You don't overload a canoe and travel downriver without lifejackets, especially when the river is high and swift.

Notes from the Streams

Well, River Rat Ray came out to catch some big ones, but this wasn't what he had in mind. After the men were safely on board, Ray maneuvered his boat so that he was also able to rescue their canoe and tow it in, which was not an easy feat that day with the swift current. After everyone was on shore, River Rat Ray was already busy assessing water damage inside his boat and attempting to dry things out. Larry, Daryl and Daryl mumbled among themselves and shuffled away with not even a small thank-you for the man who may have saved them from injury, or even death. All River Rat Ray was left with was a wet boat and the personal satisfaction of performing his good deed that day.

He has saved people before on the river and will probably do so again. It's just good to know if you run into trouble and River Rat Ray is on patrol, he'll pull you in. Don't shuffle off, though—he always appreciates a “thank you.”—*Linda Covage, Bureau of Boating and Education.*

Rules of the road

I recently witnessed a frightening incident. Two 14-year-olds were operating two new 110hp jet skis. When I first saw them, they were traveling clockwise at a high rate of speed. Encountering a runabout pulling a tube head-on, they split, each circling away from the ski boat. One teenager came close enough to shore to throw water on the people there. Instead of heading counter-clockwise away, both jet skis completed their circles and headed back toward the ski boat, which had stopped. This time the jet skis went past the ski boat and tuber at a high rate of speed, one on each side, well within 100 feet of both. They continued at this speed past the slow-no-wake buoys to the dock of our access.

Can you count the violations? The public must realize that these machines are rockets, capable of up to 75mph. Putting an inexperienced operator on one of these personal watercraft is like giving someone a lighted stick of dynamite.—*WCO Larry Bundy, Jr., eastern Sullivan/Wyoming counties.*

Snake story

On May 28, 1996, while on my way home from work, I received a call on the radio from the Berks County Emergency Communications Center requesting that I call them via telephone as soon as possible for an assignment. I was just pull-

ing into my driveway, so I called them within about a minute of receiving the call. The dispatcher said that they just received a 911 emergency call about a six- to seven-foot snake in the yard at a residence in the city of Reading. The dispatcher said that the snake was terrorizing the next-door neighbor. I told the dispatcher that I was responding immediately.

I got my snake identification book, a mesh bag and stick and proceeded to the location. I figured that a snake that size in the city was most likely not native to this area. I arrived on location about 30 minutes after receiving the call and located the address. I rang the doorbell and a gentleman answered. I told him who I was and that I was there about the large snake in the yard.

The man said, “Who called you about this?” And then he started to smile. He said, “Come in the back and I will show you the snake.”

I went into the backyard and there in the garden was a four-foot snake about four inches in diameter, coiled in a traditional “s” shape. The snake was not someone's exotic pet. It was an inflatable snake put in the garden by this gentleman to keep the birds out of his garden. We all had a good laugh, including the 911 dispatcher, when I reported that the snake was in custody.—*DWCO Al Dillon.*

Don't be so sneaky!

While on patrol at Promised Land State Park last April I noticed an individual leaving the lake after catching his limit of trout. Two hours later this same individual returned to the same spot he had fished earlier and caught eight more trout. As he prepared to leave for a second time, I confronted him and issued a citation for taking more than the legal daily limit. The individual paid the fine via mail, enclosing a note: “You could have stopped me earlier instead of being so sneaky!”—*WCO William Carey, Wallenpaupack.*

Young stocker

On May 23, 1996, I received a special shipment of trout to stock the recently refilled lake in Raccoon State Park. As a WCO I have had the pleasure of working with several of the stocking truck drivers. On this day Brad Nagle, from Big Springs Fish Culture Station, brought out the fish.

At our last stop we were approached by Mr. Mark Larimer and his three-year-old

daughter, Kyra Leigh Larimer. Mr. Larimer asked if he could take a bucket down to the lake so that his daughter could see the fish. Brad said that we could do better than that. Brad asked Kyra if she would like her own bucket of fish, to which Kyra readily agreed.

Brad then went into the cab of his truck and brought out a small bucket and lid. Brad put the fish in the bucket and gave her the bucket. Excitedly she carried it down to the lake and dumped it in. Kyra did this three more times.

Thanks to Brad, Kyra will have a memory to cherish for the rest of her life.—*WCO Raymond J. Borkowski.*

Rewarding experience

While assigned to Philadelphia County with WCO Leo George, we participated in a fishing skills program at the John Heinz Refuge. During the course of the day, we taught nearly 100 students of all ages to cast and retrieve traditional fishing equipment.

It was great to see so many parents introducing their children to the sport and taking advantage of Pennsylvania's “Fish for Free Weekend.”

Taking a child fishing will be a rewarding experience for both of you and will create memories that will last a lifetime.—*WCO Clyde Warner, Northeast Region.*

Proud of his license and first fish

Recently while checking anglers on North Park Lake, I observed a father and son attempting with some difficulty to fish at the boat launch area. I asked the father for his fishing license, whereupon he produced two—one for himself and one for his six-year-old son.

The boy was using a spinner with a bobber attached, casting out his line and waiting for a bite. I informed his father that this probably wouldn't be very productive and asked if he would like some assistance. I rigged the boy's line with a hook and a worm, hoping that he would catch a bluegill or crappie. A short time later he hooked a seven-inch largemouth bass—his first fish! Both father and son were elated.

I told the father that he should go back to the issuing agent to have his son's license voided, but he refused because his son was proud of the license and his first fish, which was properly released.—*WCO Michael Wheale.*

Stamp Artwork Soon Available as Print, Patches

A "streamscape" of Neshannock Creek, Mercer County, to be featured on the Fish and Boat Commission's 1997 Trout & Salmon Stamp, will soon be available as an art print and as a collector's patch.

The image, painted by Christopher Leeper of Youngstown, Ohio, was selected in a juried competition earlier this year for use on the Trout & Salmon Stamp. The stamps are actually permits required of all licensed trout anglers, but the quality of the artwork has also made them prized possessions for collectors. The Neshannock

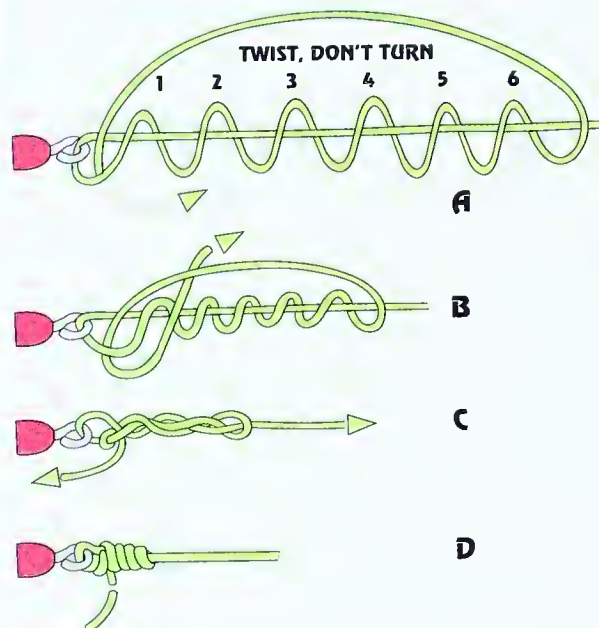


Creek scene will be the second in the latest series of stamps. The same artwork that will adorn the 1997 stamp is tentatively sched-

uled for release October 1 as a print and on an embroidered patch.

Information about the patch and print is available from the publisher: Wilderness Editions, RD 1, Box 73, Warriors Mark, PA 16877, or by phone at (814) 632-7645. The first series of stamps, issued 1991 through 1995, all displayed various species of trout found in the Commonwealth. A set of five patches representing the trout species found on those stamps will also be issued through Wilderness Editions. The release date for the patch set is also tentatively scheduled for October 1. —Dan Tredinnick.

Angler's Notebook by Seth Cassell



Clinch knots are an old standby for attaching lures and hooks to monofilament. For added strength, when you tie this knot, instead of wrapping the tag end around the main line, twist the two together. Tests show that the knot holds up better when tied in this manner.

Many spinning reels on the market today have a casting trigger that is used to release the bail. When you need to make an accurate cast, in a small open pocket between cover, for instance, cast manually and use your finger. The added sensitivity of feeling the line on your finger can help you make that pinpoint accurate cast.

Everyone knows that plastic worms are one of the best lures around for working largemouth bass in weedbeds and in tight cover. One deadly way to work them is on top. Get a small, round bead of cork and thread it on your line just above the hook. This keeps the worm afloat while probing the cover.

Many anglers like to keep more than one or two rods in the boat. The only problem is that when the rods are stored beside one another, the lines get tangled. To prevent this, leave about four inches of slack in the line when you attach the hook to the hook holder. Then, grab the line half way up the length of the rod, and wrap it around several times. When it gets tight, slip the line over a guide to hold it fast. This procedure will hold down the line between the guides and reduce the risk of tangles.

Anglers should always keep a few rubber bands in various sizes in their tackle boxes. They can be used to hold rod pieces together, keep line on spare spools, keep lids closed on lure boxes, hold leader coils together, and for many other purposes.

Muskies, pike and pickerel have sharp teeth that can inflict a substantial amount of pain on an angler's hand and fingers. To protect yourself when fishing for these species, keep a pair of leather work gloves handy. They give you added protection when handling these toothy fish.

As the calendar flips to October, most trout streams become low and clear. With this in mind, when fishing nymphs, avoid using large, bulky strike indicators. Instead, thread a brightly colored strip of fly line onto your leader, or tie a small piece of wool into the leader's blood knots. These types of indicators hit the water with little disturbance, cast well, and do a good job of letting you know if a trout is tugging at the end of your line.



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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PFBC World Wide Web Site:
http://www.state.pa.us/PA_Exec/Fish&Boat/pfbchom2.html

illustration- Ted Walke

Anglers Currents

McCullough Names 1996 Abele Award Winner

The Fish and Boat Commission has named Robert E. McCullough, Jr., of South Williamsport, recipient of the prestigious Ralph W. Abele Conservation Heritage Award. Named after the late Ralph W. Abele, who served as Executive Director of the Commission from 1972 to 1987, the award is the highest recognition the Commission can provide to persons who distinguished themselves in the cause of conservation. McCullough, 72, was selected for a lifetime of high-level service to conservation in the Commonwealth. He has served as chair of the Pennsylvania Environmental Defense Foundation, as an environmental planner for Lycoming County, as a member of the Department of Environmental Resources Citizen's Advisory Council and as a leader in Trout Unlimited.

In a citation accompanying the honor, the Commission noted: "Mr. McCullough showed through his hard work and dedication, a lasting commitment to protecting Pennsylvania's aquatic resources. His efforts directly affecting Pennsylvania's, such as stream bank cleanup projects along Slate Run and Cedar Creek, the Pine Creek protection efforts and the Babb Creek acid mine drainage projects, marked him as one of the true leaders of conservation in Pennsylvania... The lifetime effort of Robert W. McCullough, Jr., to protect, conserve and enhance Pennsylvania's natural resources reflects the highest credit on Mr. McCullough and truly warrants his selection as the 1996 winner of the Ralph W. Abele Conservation Heritage award."

McCullough was the guest of honor at the Ralph W. Abele Conservation Scholarship Fund picnic, last August.

The award serves as a memorial to Ralph Abele for his steadfast, courageous work in protecting and conserving our natural resources. Past winners include Ken Sink, Dr. Maurice Goddard, Leonard Green and Dr. Bob Kodrich.



Commissioner Enoch S. "Inky" Moore, Jr. (left), presents the Abele Award to Robert E. McCullough, Jr.

Bertolet Fishing Dock, West Reading

Recently dedicated was the Bertolet Fishing Dock, in West Reading, Berks County, along the Schuylkill River. The dock was a cooperative project among the borough of West Reading, Berks County, the Schuylkill River Greenway Association, Metropolitan Edison, and the Fish & Boat Commission.

The Commission drafted plans for the site, which was adapted for use with wheelchairs. The dock was named after Dr. Charles B. and Dorothy A. Bertolet, longtime supporters of the Schuylkill River Greenway Association. The dock is located at the foot of Chestnut Street, West Reading, and is open to public fishing.

Angler Socks it to Record Trout

To say that the story behind Vonada Ranck's big trout is quite a fish tale is to put it mildly. The 22 1/2-inch, 7-pound brook trout Ranck hauled home has been certified as an official state record by the Fish and Boat Commission. That in itself is a remarkable feat. Ranck's catch, though, had more to do with his own two feet.

Ranck was pursuing trout in Fishing Creek near Tylersville, Clinton County, when he noticed fish hitting something small and white on the surface. Unable to make a positive identification on the white objects, Rank decided to improvise. Trouble is, the only thing the 44-year-old angler from Watsonstown had that even vaguely resembled the center of the trout's attention was the white socks he was wearing. After a few snips and a little improvising, Rank hit the water again with a small piece of sock attached to a bare hook.

The rest is the stuff of legend. The fish began to hit, and the game, as they say, was afoot. Later on Rank improved on his design at home, substituting wound white thread for the bit of sock. He continued to fish with this homemade lure, and on June 8, it paid off with a "brookie" that measured in at nearly two feet.

The former brook trout record was established in 1994 at 6 pounds, 9.6 ounces. That catch was made by Shawn Keener of Ridgway.

Commission biologists have determined that the fish was a brook trout from the agency's Tylersville Fish Culture Station, located just upstream. The trout escaped during the massive flooding that occurred over the winter. —Dan Tredinnick.

Fish-for-Free Days in 1997 will be June 7 and September 27.

1997

FISHING AND BOATING

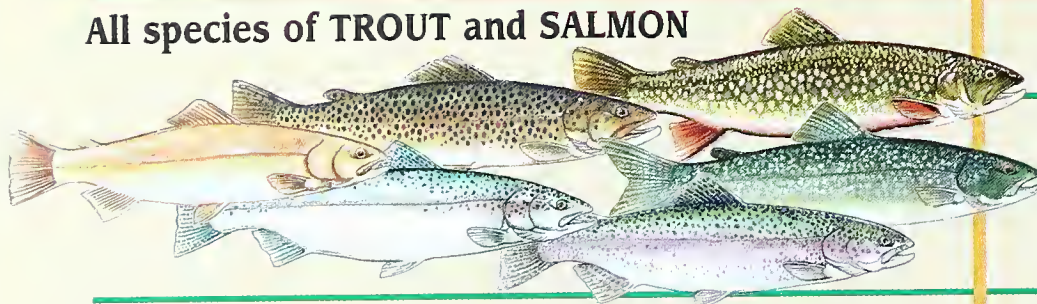
Seasons, S

COMMONWEALTH

SPECIES

SEASONS

All species of TROUT and SALMON



Regular Season- April 12 at 8 a.m. to midnight September 1

Extended Season- all approved trout streams and their downstream areas; and all lakes and ponds, January 1 to midnight February 28, September 2 to midnight December 31

BASS - Largemouth and Smallmouth and Spotted all inland waters**

January 1 to midnight April 11 and 12:01 on June 14 to midnight, December 31 ***

MUSKELLUNGE and Muskellunge hybrids

January 1 to midnight March 14 and 12:01 on May 3 to midnight, December 31

PICKEREL ****

PIKE- Northern and Amur

WALLEYE and hybrids (Saugeye)

SAUGER

AMERICAN SHAD

Open year-round

AMERICAN SHAD (Lehigh River and tributaries)

Open year-round

AMERICAN SHAD (Susquehanna River and tributaries)

Closed year-round

HERRING and **HICKORY SHAD**

Open year-round

STRIPED BASS and **STRIPED BASS/WHITE BASS HYBRIDS**

Open year-round

SUNFISH, YELLOW PERCH, CRAPPIES, CATFISH, ROCK BASS, SUCKERS, EELS, CARP, WHITE BASS

Open year-round

BAITFISH and **FISHBAIT** (except mud bugs)

Open year-round

MUDBUGS (dragonfly nymphs)

Open year-round

PADDLEFISH



Closed year-round

* Includes the Youghiogheny Reservoir and does not include SPECIAL REGULATION AREAS

** See Conowingo Reservoir and Susquehanna River and tributaries charts for special bass seasons applicable to flowing waters within the Susquehanna River Basin.


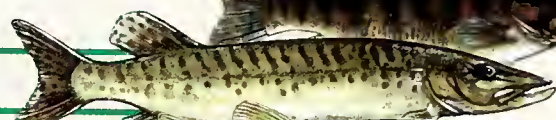
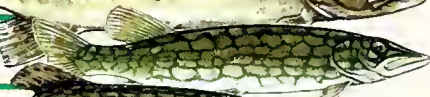




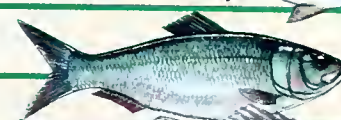



1997 OPENING DATES TROUT: APRIL 12

MEMORIES LAST A LIFETIME

Sizes and Creel Limits

INLAND WATERS*



MINIMUM SIZE	DAILY LIMIT	
7 inches	8- streams, lakes and ponds (combined species) except areas with special regulations	
7 inches	3 (combined species)	
12 inches	6 (combined species from all habitats)	
30 inches	2 (combined species)	
15 inches	6	
24 inches	2 (combined species)	
15 inches	6	
12 inches	6	
no minimum	6	
no minimum	1	
	0	
no minimum	no daily limit	
20 inches	2 (combined species)	
no minimum	50 (combined species)	
no minimum	50 (combined species)	
no minimum	Unlimited if taken from lakes, ponds, swamps, and adjacent areas. 50 per day if taken from moving waters (rivers and streams)	
	0	

*** Approved trout waters are closed to fishing from March 1 to opening day of the regular trout season in April.

**** During the period from 12:01 a.m. January 1 to midnight March 14 and 12:01 a.m. December 1 to midnight December 31, the daily limit of pickerel is three.



PIKE: MAY 3 WALLEYE: MAY 3 BASS: JUNE 14

On the Water

with Robert L. Petri

Fishing Buddies

When the free time becomes available and the urge to go fishing comes over you, who do you call? Not just anyone, I'll wager. Chances are, you have one or more special friends whose company you enjoy on the water. Folks you know and get along with. The guy who knows that you prefer to fish upstream and who says the moment you arrive at the stream, "I'll go downstream," and doesn't mind a bit. Just as you don't mind when he just has to try that same cove on the local lake just one more time. You know the one. You have tried it every time you have fished the lake together and never had a hit. But he thinks there has to be some fish there. So you always indulge him, and you don't mind. After all, what are fishing buddies for?

To the outsider, the non-angler, the special compatibility that makes good fishing buddies is something not easily grasped. After all, this is just fishing, right? Nope. It's a lot more than that. Finding the right fishing partner can be serious business. There is some sort of sixth sense involved, and just as often, a shared sense of the nature of the sport. Good fishing buddies know when the other has had enough for the day without being told. They are drawn toward the same destinations, and they like the same kinds of water. Good fishing buddies know their partners cannot abide tuna salad. They may love it themselves, but they always pack peanut butter or ham and cheese instead when it's their turn to bring lunch.

As a long-time member of a major conservation group where folks meet and talk fishing, I have watched the fishing buddy selection process unfold a hundred times. It bears more than a passing resemblance to the courtship ritual in some ways. For a period of several months, you hear that so and so are fishing together. Then something will happen, and, well, they just aren't seeing each other anymore. In the wreckage, you hear things like, "He wouldn't tell me what fly he was using," or, "He never offered to drive," or, "He got mustard all over my car seat," or worst of all, "He casts to all the good places first."

When you find a good fishing buddy, it is often for life. That's how serious all this can be. Some years ago I worked in a factory as a scheduling supervisor. There was a foreman and a machine operator who while on the job would barely give each other the time of day. The foreman would growl and snarl when the machinist would not complete a part in the allotted time. The machinist would get angry and throw stuff. You would have thought that they would have been pleased to see each other's homes burn down. Yet, every summer Saturday they were together fishing somewhere on the water. They could barely manage eight hours in the same building together, but eight hours

in a boat a mile from dry ground was easy. That is often the way it goes. All the rules are different with fishing buddies.

We all have different measurements of what makes a good fishing buddy. I need someone for whom the notion of exploration is only slightly secondary to the actual act of fishing. Somebody who will peer over the top of the map at me and say: "You know, I've never been to such and such a place, and it's only another 110 miles down the road. What do you think?" I'm almost always game.

Others are drawn together because they share the belief that the little lake just a few miles down the road is all they need. It is where their on-the-water friendship was born and has grown over the years. It is *their* place. They fish there together, and they always have. They became fishing buddies because they both saw it this way.

Over the years, I have been blessed with good fishing buddies. None was more important than my Dad. He was the gateway. He took the time to introduce me to the sport, and to teach me the ways of the fish. We fish for different things these days. He likes to ply the little lakes of northwest Pennsylvania for crappies and perch. I like getting lost up a falling ribbon of trout water a mile or more from the nearest road. But in every tough trout I fool and bring to hand is a piece of the experience and learning I picked up at his side many years ago. He gave freely of

his time and knowledge, the way all good fishing buddies do.

There have been many other good fishing buddies over the years. My somber boyhood pal, Jim, who seldom said more than a few dozen words per outing. We didn't talk much, but we both loved the same creek. We fished it together, and learned it well. My brother, who would get into the car complaining about how far we were driving to fish, but who put up with my wanderlust all the same. I always just figured that complaining was part of his nature and kept on driving. We have fished a hundred streams together, me driving, him complaining. I wouldn't want it any other way. My good friend Eric, who didn't care where we went, as long as the trout were wild and we saw some new water. I have been fortunate when it comes to fishing buddies.

I've had the best that anyone could ask for, and I cherish them all. You should, too. After all, the joy of friendship and the joy of angling are two distinctly different things, each powerful and wonderful in its own right. When they come together with the right fishing buddy on the right piece of water, they bring us one of life's greatest pleasures. Here's to good fishing and good friends to share it with always.



ANGLER



Pennsylvania Fish & Boat Commission

PUBLICATIONS

Wall Charts 17" x 22" in full color

	Qty.	Price	Total
Coldwater Fishes of Pennsylvania		\$.50 + .03*	\$
Warmwater Fishes of Pennsylvania		\$.50 + .03*	\$
Migratory Fishes of Pennsylvania		\$.50 + .03*	\$
Miscellaneous Game Fishes of Pennsylvania		\$.50 + .03*	\$
Panfishes of Pennsylvania		\$.50 + .03*	\$
Forage Fishes of Pennsylvania		\$.50 + .03*	\$
Frogs of Pennsylvania		\$.50 + .03*	\$
Salamanders of Pennsylvania		\$.50 + .03*	\$
Snakes of Pennsylvania		\$.50 + .03*	\$
Turtles of Pennsylvania		\$.50 + .03*	\$
Mail orders for above wall charts only. Add: \$2.00 (1-5 charts) \$3.00 (6 or more charts)			\$
Sub-total			\$

Books

	Qty.	Price	Total
Pennsylvania Amphibians & Reptiles		\$10.00 + .60*	\$
Weight-Length Estimator		\$2.00 + .12*	\$
Guide to Public Fishing Waters and Boating Access		\$2.00 + .12*	\$
Identification Guide to Pennsylvania Fishes		\$2.00 + .12*	\$
Fishing and Boating Self-Adhesive Yardstick		\$.94 + .06*	\$
Sub-total			\$

Pamphlets

By mail, total of first three are free. Thereafter include \$1.00 for each five ordered; can mix or match titles.

Qty.	Title
	Acid Precipitation
	Angler Award Program
	Bass, Muskie, Walleye Fishing
	Delaware River in Pennsylvania
	Drinking, Boating and the Law
	I Just Bought a Boat
	Ice Fishing in Pennsylvania
	Lakes in Pennsylvania

Qty.	Title
	Limestone Streams
	Map Sources
	Marine Fire Extinguishers
	Personal Flotation Devices
	Shad Restoration
	Trout Fishing in Pennsylvania
	Wetlands
	Zebra Mussels
Total Pamphlets	
Sub-total	

* PA residents include 6% sales tax.



PUBLICATIONS

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P.O. Box 67000, Harrisburg, PA 17106-7000.

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PLAY 1980		\$3.00 +.18*	\$
PLAY 1981		\$3.00 +.18*	\$
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Maps Useful to Pennsylvania Anglers

The Pennsylvania Fish and Boat Commission does not sell these maps. For ordering and other information, contact the company or agency directly.

County Maps

Type 3, or the larger multi-colored **Type 10 County General Highway Maps**, show all public roads including state, township and forest roads. Lakes, rivers and streams in the counties are also shown. Contact PA Department of Transportation, Publications Sales Store, P.O. Box 2028, Harrisburg, PA 17105. Telephone 717-787-6746.

Pennsylvania: County Maps and Recreational Guide provides a handy guide book for the traveler and sportsman. The easy-to-use reference guide contains maps of each county showing roads, parks and wilderness areas. Available from: County Maps, Puetz Place, Lyndon Station, WI 53944. Telephone 608-666-3331.

Five-color, full-topographic county and county region maps are also available from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

Topographic Maps

Topographic maps are published and sold by the U.S. Geological Survey. An **index** showing the topographic maps for each quadrant of the state is free. The index includes the area covered by each quadrangle map, its name, scale and year of survey. Addresses of local map dealers and federal map distribution centers are also provided. Contact: Map Distribution Center, U.S. Geological Survey, Box 25286, Federal Center, Denver, CO 80225. Telephone 303-236-7477.

In Washington, D.C., over-the-counter sales (no mail orders) are available from: U.S. Geological Survey, Main Interior Building, 1849 NW "E" Street. Hours 8:00 a.m. to 4:00 p.m. Telephone 202-208-4047.

The Pennsylvania Atlas and Gazetteer is a comprehensive guide with topographic maps that list roads, mountains with elevation contours, forest areas, marshes, waterways, boat ramps and dams. Contact: DeLorme Mapping Co., P.O. Box 298, Freeport, ME 04032. Telephone 207-865-4171.

Waterproof **Rough Country Topos** are available for all field-use scale topographic quadrangle map areas in Pennsylvania. Raised relief maps and regional topographic maps can also be purchased from: Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

The U.S. Forest Service publishes a map of the **Allegheny National Forest**, detailing all the forest service roads, as well as the locations of the region's trout waters. The map costs \$3.00 plus tax. Contact: U.S. Forest Service, 222 Liberty Street, Warren, PA 16365, or call 814-723-5150.

Lake Structure (Hydrographic) Maps

These maps show "structure" (depths, bottom contours, dropoffs, etc.) and are available for several lakes.

International Map Co., 547 Shaler Boulevard, Ridgefield, NJ 07657. Telephone 201-943-6566 or 943-5550.

Northwoods Publications, Inc., 430 N. Front Street, Wormleysburg, PA 17043. Telephone 717-761-1400.

Modern Explorer Products, P.O. Box 588, Hopwood, PA 15445. Telephone 412-438-7686.

River, Stream Maps

The Delaware River and Outdoor Recreation. Series of 10 maps of the Delaware River. Waterproof maps showing physical characteristics and recreational facilities of the river from Hancock, NY to Trenton, NJ. Contact: Delaware River Basin Commission, Box 7360, West Trenton, NJ 08628. Telephone 609-883-9500.



Delaware River north of Stroudsburg

Howard William Higbee's Stream Map of PA (includes a free location guide). Shows 45,000 miles of Pennsylvania waterways, including the locations of 900 trout streams and 300 lakes, dams, reservoirs and ponds. Identifies "Class A" limestone streams, bass waters and trophy fish waters. Contact: Vivid Publishing Co., 347 Rural Avenue, Williamsport, PA 17701. Telephone 717-322-1167.

Schuylkill River Users Guide. Series of eight waterproof maps. Identifies public access sites, stream flow characteristics and dams and pools, from Port Clinton to Fairmount Dam. Obtain from the State Book Store, 1825 Stanley Drive, Harrisburg, PA 17103. Telephone 717-787-5109.

Susquehanna Water Trails. Detailed canoeing map of the Susquehanna River through the Endless Mountains of northeast Pennsylvania. The map shows towns, highways, access areas, camping areas and major islands. Endless Mountains Tourist Bureau, RR 6, Box 132A, Tunkhannock, PA 18657-9232. Telephone 717-836-5431 or 1-800-769-8999.

Navigation/Nautical Charts

Allegheny, Monongahela and Ohio Rivers Navigation Charts are available for the Allegheny River (mile 0-72), Monongahela River (mile 0-128.7) and Ohio River (mile 0-127.2). Contact: U.S. Army Corps of Engineers, 1000 Liberty Avenue, Pittsburgh, PA 15222. Telephone 412-644-6872.

Nautical Charts of Lake Erie and the Delaware River are available from Distribution Branch (N/CG33), National Ocean Service, Riverdale, MD 20737. Telephone 301-436-6990. Lake Erie charts are in Nautical Chart Catalog 4; Delaware River charts, Catalog 1.



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Fish Scale Sketch



The Pennsylvania Fish and Boat Commission is the sole state agency, charged by law, to manage the fisheries and to regulate fishing and pleasure boating in the Commonwealth. The Commission also has a vital, mandated interest in the enhancement and preservation of the state's aquatic environment. These responsibilities have been in place for more than 130 years, growing steadily in scope, complexity and the number of people served.

Replying to a statewide convention of interested Pennsylvania citizens already concerned about the state's water courses and aquatic resources, in 1866 the legislature created what is known today as the Pennsylvania Fish and Boat Commission. Governor Andrew Curtin signed the act into law on March 23, 1866. It provided for one commissioner, appointed by the Governor, whose primary concern was monitoring shad migrations in the state's rivers. Today, 10 members make up the Board of Commissioners.

Physical growth of the Commission began with the state's first fish hatchery, established in Lancaster County in 1873.

The water source was one of the famed Donegal Springs. A western station, near Corry, Erie County, followed in 1875. The modern hatchery on that site remains in use today. The Commission's facilities and land and water holdings have increased to keep up with the growing population and increased demand for services.

In its early years the Commission was supported by public subscription instead of general fund appropriations. The first fishing license was sold in 1922. That philosophy continues today. No state general fund tax money is used for Commission operations. As an independent state agency, the Commission is supported primarily with angler and boater dollars through the sale of fishing licenses and boat registrations. The Commission also receives a portion of federal taxes paid by boaters on marine fuels and a percentage of federal excise taxes on sporting goods.

The Commission is recognized as one of the leading aquatic resource agencies in the nation. It continues to protect the aquatic environment while balancing the demand for recreational fishing and boating opportunities.

The Fish and Boat Commission is comprised of 10 members who serve eight-year terms without pay. The Commission has been serving Pennsylvania residents for more than 130 years.

The Pennsylvania Fish and Boat Commission is the sole state agency, charged by law, to manage the fisheries and to regulate fishing and pleasure boating in the Commonwealth.





The Commission issues some 1.2 million fishing licenses annually.



The Pennsylvania Fish and Boat Commission...

- is made up of 10 members who serve eight-year terms without pay.
- has an eight-member Boating Advisory Board whose members serve without pay.
- has been serving residents of the Keystone State for more than 130 years.
- enforces the Fish and Boat Code.
- issues some 1.2 million fishing licenses annually.
- promulgates and enforces rules and regulations governing fish and fishing, boating, and reptiles and amphibians.
- has been responsible for boating on Commonwealth waters since 1931.
- owns or has under easement more than 50 lakes and more than 250 access areas in the Commonwealth.
- has 14 fish culture stations strategically located throughout the state.
- operates a fleet of 45 trucks for stocking fish.
- each year stocks more than five million adult trout in more than 800 streams, totaling some 5,000 miles, and over 100 lakes that total more than 5,000 acres.
- annually stocks some 100 million warmwater species of fish as fry, fingerlings and adults.
- through its biologists conducts stream surveys, gathers biological data and manages warmwater and coldwater fisheries in Commonwealth waters.
- is represented in the field by a force of some 82 waterways conservation officers (WCOs), whose duties range from law enforcement and public speaking to investigating water pollution and conducting fishing and boating schools.
- has a force of about 315 deputy WCOs, essentially volunteers, who assist the field force of salaried officers.
- wages a continuing fight for clean water in a typical year with field officers investigating more than 400 cases of aquatic pollution.
- has a Cooperative Nursery program, unique in the country, in which sportsmen and the Commission combine efforts to raise additional fish for public waters.
- has a Volunteer Education & Information Corps that presents programs and instructs fishing and aquatic resource education classes.
- conducts teacher workshops to acquaint teachers with conservation education principles.
- operates a fleet of patrol cars and patrol boats of varying sizes to provide for safety, law enforcement and research.



- publishes *Pennsylvania Angler* magazine and numerous books, pamphlets and brochures.
- reviews mining, construction and encroachment permit applications to ensure that waterways are not degraded.
- oversees expenditures of angler and boater dollars.
- coordinates federal aid programs.
- serves on inter-agency task force on fish consumption advisories.
- annually registers more than 330,000 boats, ranking eleventh of the 50 states with the highest number of registered boats.
- certifies more than 14,000 boaters annually through the Commission's voluntary eight-hour Basic Boating Course.
- operates one of the best research stations in the nation, with a staff of expertly trained biologists and scientists.
- operates a large research vessel on Lake Erie to serve this unique resource.
- In the "Adopt-a-Stream" program, oversees habitat maintenance and improvement projects on waterways across the state.



water POLLUTION

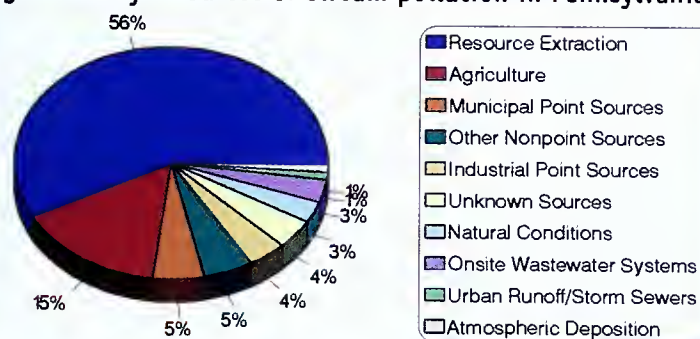
by John A. Arway

The most recent Pennsylvania Department of Environmental Resources (now Department of Environmental Protection—DEP) assessment of water quality and biological conditions of Pennsylvania streams and rivers shows that 49,315 miles (91.4 percent of the 53,962 miles of streams) are believed to be supporting the federal Clean Water Act's "fishable/swimmable" goal. However, stream uses were either partially or fully violated in the remaining 4,647 miles of streams. This means that 8.6 percent, or 4,641 miles, of our total stream miles cannot fully support swimming, fishing or both because of water pollution.

The largest source of pollution affecting our stream quality is mineral resource extraction. This accounts for 2,596 miles (56 percent) of degraded water. The primary source is abandoned mine drainage, which affects at least 2,404 miles. The major sources of degradation are summarized in Figure 1.

The yellowish-orange stream-bottom staining of "yellow boy" is caused by acid mine drainage.

Figure 1. Major sources of stream pollution in Pennsylvania



Source: 1994 DER 305 (b) Report
Total: 4637 Miles

The pollution provisions of the Fish and Boat Code date back to 1905. These laws provide the legal framework for Commission Waterways Conservation Officers to apprehend polluters, incurring fines and penalties. The Commission also recovers damages to aquatic resources after water pollution occurs and fish and other aquatic life have been killed. A review of Bureau of Law Enforcement Water Pollution Reports, which include both pollution and watershed disturbance cases, reveals that 423 cases were investigated in 1992. These cases resulted in 354 settlements totaling \$569,000 in penalties. However, the best way to deal with water pollution is to prevent it from happening in the first place.

Pennsylvania's water pollution control program dates back to 1905, and the Commonwealth's first comprehensive water pollution control law, the "Clean Streams Law," was enacted in 1937. The Clean Streams Law has been strengthened over time by many legislative amendments. It has been used very effectively by the Department of Environmental Protection to control point source pollution (sewage and industrial wastes).

An analysis of Commission Water Pollution Report records



water POLLUTION

degraded by acid mine drainage (AMD).

A Commission estimate of the lost recreational fishing use value to the Commonwealth due to AMD pollution is \$67 million per year.

Agriculture is second, contributing to 694 miles (15 percent) of degraded streams. Other sources of nonpoint pollution (5 percent), urban and stormwater runoff (one percent) and acid rain (one percent) complete the list of NPS problems that have been identified in the Commonwealth.

Acid mine drainage

The greatest single source of water pollution in Pennsylvania is acid mine drainage. AMD is a byproduct of the surface and deep mining of anthracite (hard) and bituminous (soft) coal. Pennsylvania has over 2,400 miles of streams that are polluted by AMD.

About 9 million tons of municipal waste are produced each year in Pennsylvania. However, much of this trash does not go to the local landfill. It ends up in our streams and rivers as litter.

and DER water quality assessment reports reveals that overall environmental health in Pennsylvania streams has been stable or slightly improving over the past 15 years (Figure 2).

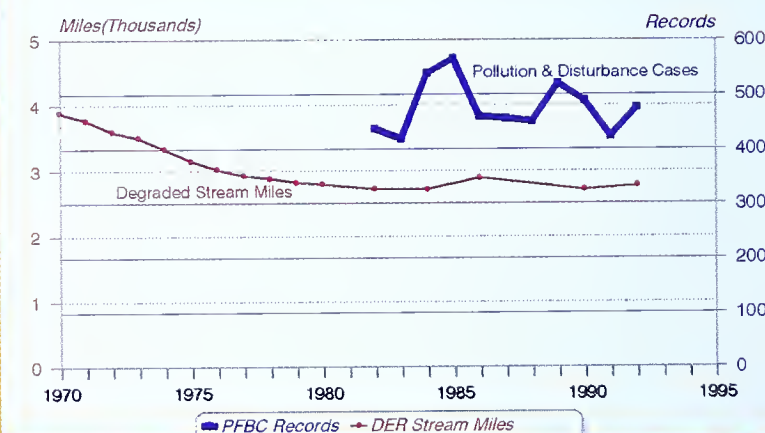
However, today's water pollution problems are dominated by nonpoint sources (sometimes referred to as "polluted runoff"), as shown in Figure 1. Toxic substances are also a great concern because they can now be measured in very low concentrations (parts per trillion or even quadrillion). These substances are also the subject of much public interest because of the potential risks they pose to natural resource and public health.

Nonpoint source (NPS) water pollution

This category of pollution accounts for over 78 percent of the total water pollution problem in Pennsylvania. Figure 3 shows the distribution of the miles of streams degraded by nonpoint sources of pollution by major drainage basins as classified by the State Water Plan. This figure represents only those reported problems that we know about. Many more sources of NPS exist that have not been reported and are not included in this inventory.

The greatest source of NPS in Pennsylvania is resource extraction. This includes the effects of mining and oil and gas production. This kind of pollution degrades 2,596 miles of streams (56 percent of our total degraded stream miles). Discharges from abandoned minelands account for 2,404 miles of streams

Figure 2. Water pollution trends in Pennsylvania



The major sources of AMD are from coal mines abandoned in the early 1900s that discharge millions of gallons of acidic water into our streams each year. However, we still have coal operators even today abandoning their treatment systems, filing for bankruptcy and leaving behind their discharges for the Commonwealth to decide whether or not it's in the best public interest to continue chemical treatment.

Soil and crushed rock (called "overburden"—the material between the surface and the actual coal seam) uncovered while mining coal may contain iron pyrite, or fool's gold. When these pyrites are exposed to air and water, a chemical reaction occurs that forms iron hydroxide and sulfuric acid. This acid then dissolves other minerals and metals from the surrounding rock. These dissolved elements ultimately find their way through the local groundwater into a nearby stream. These groundwater discharges can be very acidic (depending on the amount of pyrite in the overburden). They can also contain high levels of toxic metals such as iron, aluminum and manganese.

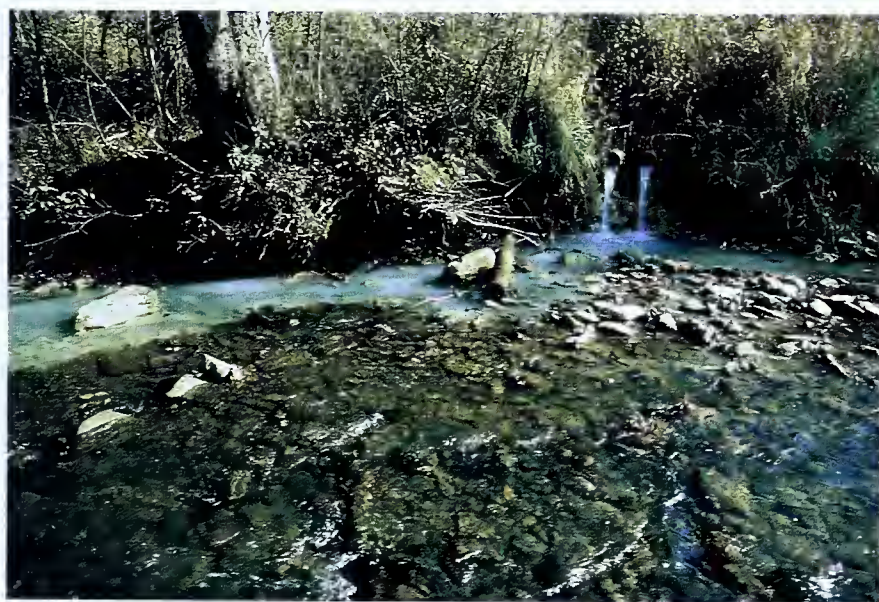
One of the most apparent signs of mine drainage is the yellowish-orange staining, or "yellow-boy," left on stream bottoms. This results from the high levels of iron dissolved in the groundwater suddenly coming in contact with the oxygen in the air or dissolved in the surface water. The iron then becomes "oxidized" and precipitates out of solution. This can also happen with aluminum (white) or manganese (black). It is the reason why we



have different colored streambeds in different parts of the Commonwealth. Fish and other aquatic animals cannot tolerate much acidity. Most of the metal precipitates are either directly toxic or fill in the spaces between the rocks in the stream bottom so that there is no place left for aquatic invertebrates (fish food organisms) to live.

Siltation is another source of pollution from mining, especially when large surface areas are disturbed. During rainstorms the soils wash away from the mine sites into local streams. They then become sediment or siltation and coat the stream bottoms, much the same way as metal precipitates pollute streams.

AMD pollution is a very serious problem in Pennsylvania and will continue to plague us for many years. There are no magical or even simple solutions to solving this problem, but there are some promising new technologies. If we can stop the creation of additional AMD problems by applying and enforcing present environmental regulations, there is hope that we can restore a fishable/swimmable use to many of those 2,400+ miles of streams that were once thought to be lost forever.



Brine discharge emptying into Lewis Run, McKean County.

Oil and gas development

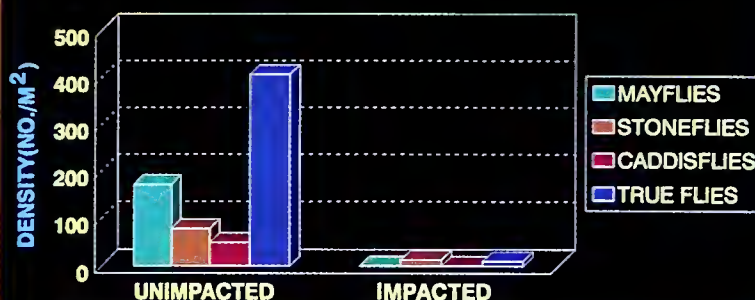
Oil and gas development includes the drilling, stimulation (fracturing underground rock formations with pressure) and production of oil and natural gas deposits buried deep beneath the land's surface. It occurs in more than 30 counties throughout the Commonwealth, but is concentrated mostly in the northwestern and southwestern parts of the state. It all began when Colonel Edwin Drake drilled our nation's first oil well in 1859 in Titusville, Venango County. Since then, the industry has grown substantially in response to society's demand for these fossil fuels, and the environmental effects have been significant.

Operating wells produce large volumes of brine (salty water). Brine contains a virtual laundry list of other toxic chemicals. These brines are discharged directly into many of our headwater native brook trout streams. They also leak from unlined pits designed to separate the oil from the brine. Untreated brine discharges and leaks contaminate ground and surface waters. These untreated brines can cause severe effects. Commission studies have actually found some of our freshwater streams to be saltier than seawater. Improved regulation of the oil and gas industry has required many developers to pollute less, but many operators still discharge directly into streams until they are caught.

Oil spills are another problem in the oil fields. In 1985, the

EFFECTS OF AMD ON A FREESTONE STREAM SYSTEM

BENTHIC MACROINVERTEBRATES



US EPA estimated that the amount of oil spilled in a four-county area of the Allegheny National Forest in northwestern Pennsylvania qualified as a major oil spill and activated a response from the Atlantic Strike Force Team of the US Coast Guard. The Coast Guard team walked through individual watersheds in this four-county area and identified all of the places where oil was spilled or brines were discharged. These places were then rated, and the most serious were systematically cleaned up by the EPA.

In addition, miles of new dirt roads and forest clearing have led to sedimentation problems.

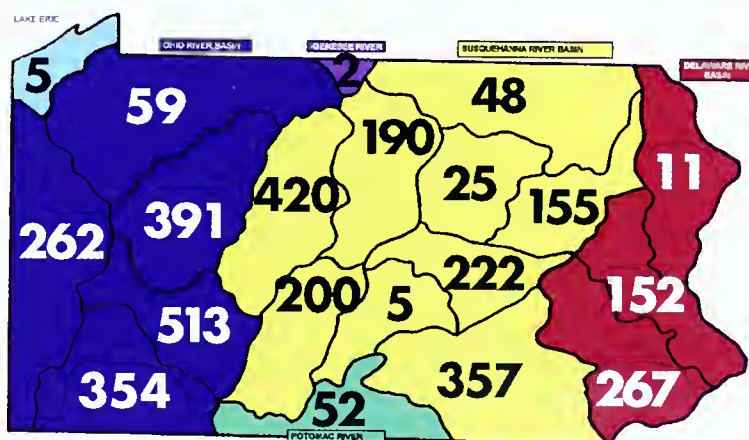
Agriculture

Agriculture is the number one industry in Pennsylvania. Agricultural wastes such as manure, liquid and granular fertilizers, silo liquids, pesticides, and silt can be transported into streams during rainstorms or after snowmelt. These wastes can physically injure aquatic habitats by filling in stream channels. They may also be directly toxic to fish, other aquatic organisms and plants because of their chemical properties.

Manure and other fertilizers from farm fields that wash into streams and downstream reservoirs continue to stimulate the growth of vegetation—aquatic vegetation. This aquatic vegetation, often referred to as nuisance aquatic vegetation, can grow uncontrolled in downstream lakes and reservoirs. The growth is fueled by the fertilizers once intended to grow agricultural crops for our tables.

Pesticides include both herbicides and insecticides. They can also be washed from farm fields into nearby streams, but they

Figure 3. Miles of streams in major drainage basins degraded by nonpoint source pollution



have a much different effect. These chemicals were developed to control plant and animal pests. When they enter foreign environments like our streams, they cannot discriminate between a pest like a potato bug and a brook trout. Pesticides can be very toxic to aquatic animals at very low levels. This is why pesticides must be handled very carefully according to the label specifications. Many pesticides should be applied only by applicators certified by the PA Department of Agriculture.

water POLLUTION

our streams and rivers each year. We can all do our part in keeping our waterways free of trash by practicing proper disposal and recycling, cleaning up after others and reporting violators.

Residual wastes range from municipal-type wastes produced in bulk by one industry to "near hazardous" materials. Residual wastes are regulated by the PA DEP somewhat differently than municipal wastes because they can contain a wide variety of waste forms. About 16 million tons are generated annually in Pennsylvania.

Hazardous wastes are wastes that have hazardous properties that meet or exceed thresholds such as ignitability and corrosivity. The DEP in consultation with the US EPA maintains a list of wastes that qualify as hazardous. About 800,000 tons of hazardous waste are produced every year in the Commonwealth.

Radioactive wastes give off harmful alpha, beta, and in some cases, gamma rays. The rays can destroy tissues in living organisms and can cause serious physical defects, including sterilization.

Three Mile Island along the Susquehanna River just south of Harrisburg was the site of the worst commercial nuclear accident in US history. On March 28, 1979, failure of the cooling system of the No. 2 nuclear reactor led to overheating and partial melting of its nuclear core. Some radioactive gases and water were released from the plant, but no signs of damage to the fishery were ever measured.

Pennsylvania is required by interstate compact to construct and operate a low-level radioactive waste disposal facility by the year 2002. Pennsylvania produces more than 127,000 cubic feet of low-level waste per year that emits over 59,000 curies of radiation. A comprehensive site selection process is presently being performed. Combined with stringent environmental protection regulations, the site will fully protect the health of both the public and natural resources living close to the facility.

Acid deposition

Acid deposition is primarily the result of manmade emissions from fossil-fuel burning, automotive exhausts and other industrial processes. These processes emit sulfur dioxide (SO_2) and ni-

Streambanks erode because of unrestricted use of the stream by cattle.

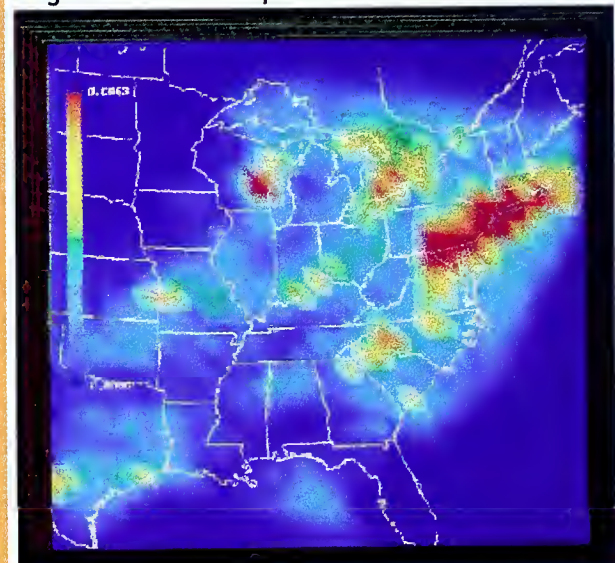
Livestock allowed to graze freely through streams can also cause streambank erosion and sedimentation. Streambank fencing is a useful technique to establish vegetative "buffer zones" next to streams. These buffer zones filter out sediments, nutrients and other agricultural pollutants. They also decrease streambank erosion and provide important riparian (streambank) habitats for reptiles, amphibians and other wildlife.

Municipal, residual, hazardous and radioactive wastes

Municipal wastes are our common garbage that most of us put out for our trash collection. About 9 million tons of municipal waste are produced each year in Pennsylvania. However, much of this trash does not go to the local landfill. It ends up in our streams and rivers as litter. No one enjoys swimming, fishing or even playing in a stream when we must contend with broken bottles, rusty cans and other trash. Yet, some people continue to use our streams as their personal garbage cans. They fail to see that a small stream is an important part of a larger ecosystem—one that we also live in. And by spoiling one small part, they are guilty of degrading their downstream neighbor's backyard.

Although many of today's mandatory recycling requirements and incentives are preventing trash of value from entering our streams and rivers, not all materials are recyclable. Many concerned citizens and conservation groups voluntarily remove trash from

Figure 4. Acid rain patterns in the Eastern U.S.



trogen oxide (NO_x) gases. These pollutants are sent into the atmosphere, chemically changed, and returned either as wet deposition (rain, sleet or snow) or as dry deposition in the form of sulfate and nitrate particles in dust. Such deposition is declared acid when it has a pH lower than normal. A raindrop containing no impurities and in equilibrium with atmospheric carbon dioxide has a pH of approximately 5.6. Actually, such "normal" precipitation is also acidic when compared to the actual pH scale of 0 to 14 where a pH of 7 is regarded as neutral, the mid-point between base and acid.

The pH of our rainfall averages around 4.1. This reading is many times more acidic than unpolluted rain. Because all surface water and ground water depend on precipitation for replenishment, nothing escapes at least some effect of acid deposition. Individual areas of the state may respond differently to acid deposition, depending on the region's natural ability to "buffer," or neutralize, the incoming acidity.

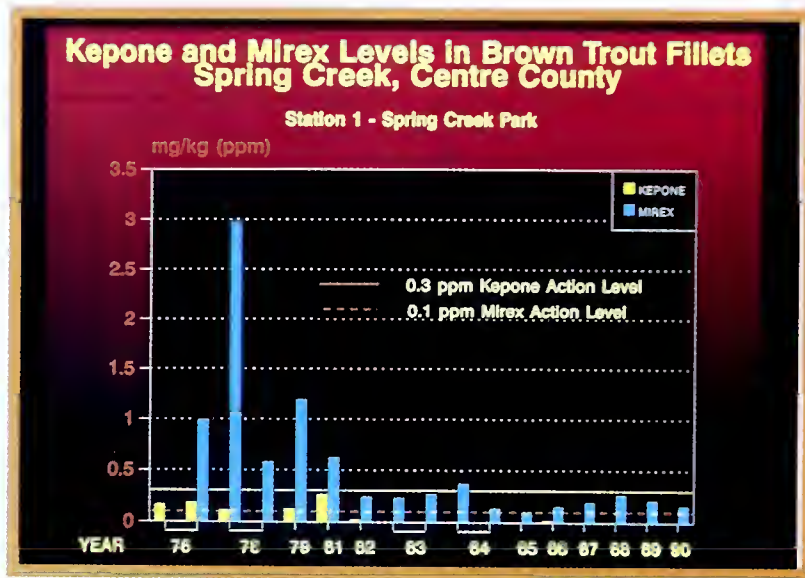
This ability of a waterway to neutralize acids is called its "acid neutralizing capacity." This ability depends on the dissolved mineral content in the water. The dissolved mineral content in the water depends on the composition of the soils and bedrock in the watershed.



Oil and gas lease road provides access to hundreds of wells.

Many watersheds in Pennsylvania located in the mountainous Allegheny Plateau Region have low acid-neutralizing capacities. Figure 4 shows the distribution of acid rainfall patterns in the eastern US. Red indicates the most acidic rainfall, grading to blue, which is the least acidic. Fish and other aquatic life found in these watersheds are adversely affected by the increased acidity. This acidity often increases toxic metal concentrations such as aluminum in much the same way as explained in the discussion of AMD. Acid deposition also affects forests, buildings, drinking water and human health. More simply stated, acid deposition is potentially harmful to most living things.

In 1990, Congress approved the Clean Air Act Amendments. For the first time, these laws included legislation to control acid deposition. The legislation and the tighter controls placed on industry smokestacks and our own automobile emissions might improve Pennsylvania's affected streams, rivers and lakes. We can also do our part to limit air pollution by saving energy, promoting mass-transit and supporting strict automobile emission inspection.



Municipal point sources (sewage)

Domestic sewage treatment has traditionally meant an effluent discharge to a stream, river or large lake. Sewage discharges typically contain suspended solids, nutrients (nitrogen and phosphorus), chemicals that exert a biological oxygen demand on the receiving stream, and to a lesser extent, thermal effects, pesticides, toxic organics and metals.

Successful removal of these substances varies with the type of treatment used. Primary treatment removes some solids but not much else. Secondary treatment should remove at least 85 percent of the suspended solids and biological oxygen demand. However, a third treatment is necessary to reduce nitrogen and phosphorus concentrations effectively.

Excessive quantities of solids and nutrient enrichment can promote algal blooms and alter aquatic insect communities by causing an imbalance in aquatic communities. Sensitive organisms disappear and are replaced by pollution-tolerant organisms such as aquatic worms or midges. Sewage discharges can also negatively affect coldwater streams by increasing water temperatures.

Sewage pathogens are often removed in the treatment process by chlorination or exposure to ultraviolet light.



Papermill lagoon discharge, headwaters of Riley Run, Elk County.

Chlorine is a problem in many discharges because it is inexpensive to use and discharges are often overdosed because of concerns about human health. Chlorine is a very effective biocide designed to kill bacteria that live in the sewage. But when it is improperly applied, chlorine also very effectively kills non-targeted aquatic animals, including fish.



The outfall from a sewage treatment plant flows into a stream.

Sewage has been the primary target of Pennsylvania's water pollution control program in the past because of problems associated with malfunctioning on-lot septic systems. There has been much progress made in the collection, centralized treatment and discharge of sewage, which has resulted in significant improvements in water quality and fisheries of our large rivers like the Delaware River near Philadelphia and the Three Rivers area of Pittsburgh. However, municipal sources remain our number 3 major source of stream pollution, causing over 400 miles of degraded streams (Figure 1). More modern methods of sewage disposal that appear promising as new technology include spray irrigation and land and artificial wetland treatment systems.

Industrial point sources

The PA DEP permits and regulates the discharge of treated industrial wastes through the National Pollutant Discharge Elimination System (NPDES) program. Permit engineers in Regional DEP offices use the water quality standards contained in 25 PA Code Chapter 93 and site-specific data on the water quality and flow of the receiving stream in setting discharge limits to ensure that the stream is not polluted. The Chapter 93 standards contain the stream's designated uses (aquatic life, water supply, and recreation) and numerical water quality criteria designed to protect those uses. The Fish & Boat Commission and DEP work cooperatively to decide how a stream should be designated. They also decide when criteria should be strengthened or lowered based on the best available scientific data. This procedure ensures that aquatic communities are protected whenever a discharge is permitted. Unfortunately, we cannot predict accidents, equipment failure or even negligence. When these occur, the frequent result is damaged aquatic communities.

Fish tissue contaminants

Pennsylvania's monitoring of toxic pollutants in fish tissue began in 1976. The purpose of this monitoring is to gather information so that the Commission, DEP and PA Department of Health can make decisions about advising the public to limit or cease consuming fish caught in contaminated areas. This decision is made jointly by the three agencies. They compare the concentrations of various toxic compounds found in fish tissue with the Food and Drug Administration's "Action Levels." These are designed to protect consumers from the adverse public health effects of eating contaminated goods sold in interstate commerce.

Beginning in 1993, the Commission's *Summary of Fishing Regulations and Laws* provided to every licensed angler contains a table of all consumption advisories (do no eat) and no-kill zones.

PCBs and chlordane are the primary contaminants that cause a stream or river to be listed. However, individual listings for mercury, dioxin and mirex also occur. Most of the listed waters are large rivers that are highly industrialized and contain many point and nonpoint sources of toxic discharges. Most of the chemicals of concern are extremely persistent. They will remain in our environment well into the future.

Although much progress has been made in cleaning many of our waterways and restoring a fishable use, we now face the challenges of monitoring the uptake of toxic chemicals in fish living in many of these waterways. Important decisions must be made about the fate and effects of these chemicals on the health of fish as well as these chemicals' effects on the health of the anglers and their families who consume the fish.

Major advances in the way we identify the chemicals allow us to detect concentrations in parts per trillion or even parts per quadrillion. Similar advances in aquatic and human health toxicology allow us to protect the resource and the public better because of our advanced knowledge about the health risks posed by these toxic compounds. In fact, new human health-based risk assessment guidelines supported by medical experts in the Great Lakes states should soon replace the outdated FDA action levels.



Abandoned oil separator pit in the Allegheny National Forest.



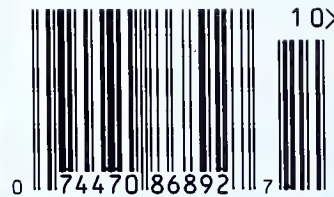
water POLLUTION

Commission employees process water samples collected during a stream pollution investigation.

Sources	Pollutants
Non-Point Source Pollution	
Coal mining	Sulfuric acid, iron, aluminum and manganese, sulfates and silt
Oil and gas development	Oily wastes, saltwater (brine), high or low pH, phenols, metals and silt
Agriculture	Manure and other fertilizers, pesticides and silt
Waste disposal	Organic wastes, metals, litter, radioactivity and a variety of other toxins
Acid deposition	Low pH, high acidity and metals
Point-Source Pollution	
Municipal	Nutrients, solids, heat, other organic wastes and chlorine
Industrial	
<i>Steel mill</i>	Acids, cyanide, phenol, heated water, metals and oil
<i>Paper mill</i>	Lignin, cellulose fibers, acids, caustic bases, sulfites, metals, heat and chlorine
<i>Tannery</i>	Organic compounds, acids, bases and metals
<i>Slaughterhouse</i>	Blood, fat, meat juices
<i>Power plant</i>	Heat, silt, chlorine and radioactivity (nuclear)
<i>Laundromat, car wash</i>	Silt, detergents and organic wastes



water POLLUTION



Regional Law Enforcement Headquarters

Northwest Region. Box 349 (1281 Otter Street), Franklin, PA 16323; 814-437-5774. J. Gary Moore, Manager; Gary Deiger, Assistant Supervisor. Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango and Warren counties.

Southwest Region. RD 2, Box 39 (Lake Somerset), Somerset, PA 15501; 814-445-8974. Tony Murawski, Manager; Emil Svetahor, Assistant Supervisor. Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland counties.

Northcentral Region. Box 187 (Fishing Creek Road), Lamar, PA 16848; 717-726-6056. Paul Swanson, Manager; William Hartle, Assistant Supervisor. Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, Lycoming, McKean, Northumberland (west of Rt. 147), Potter, Snyder, Tioga and Union counties.

Southcentral Region. 1704 Pine Road, Newville, PA 17241; 717-486-7087. Larry Boor, Manager; Guy Bowersox, Assistant Supervisor. Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lebanon, Mifflin, Perry and York counties.

Northeast Region. Box 88 (Main Road), Sweet Valley, PA 18656; 717-477-5717. Kerry Messerle, Manager; G.W. Frank Kann, Assistant Supervisor. Bradford, Carbon, Columbia, Lackawanna, Luzerne, Monroe, Montour, Northumberland (east of Rt. 147), Pike, Sullivan, Susquehanna, Wayne and Wyoming counties.

Southeast Region. Box 8 (Brubaker Valley Road), Elm, PA 17521; 717-626-0228. Barry Pollock, Manager; James Wagner, Assistant Supervisor. Berks, Bucks, Chester, Delaware, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia and Schuylkill counties.

You can also call the Commission's Clean Water Hotline at 1-800-854-7365. The hotline operates 8 am to 4 pm weekdays. At other hours, a recorder will take your message.

You may also call the Department of Environmental Protection's Emergency Number at 1-800-541-2050. This number operates 24 hours and day, 7 days a week.

Note: These phone numbers are only for reporting water pollution. For other Fish and Boat Commission business, or for more information, call (717) 657-4518. If you would like technical information about how pollution affects aquatic life, contact: PA Fish & Boat Commission, Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823; phone: 814-359-5147.

Reporting Pollution

If you have concerns that a water pollution is occurring, or if you have information about a suspected pollution, and if you're calling during regular business hours, please first call the Commission regional headquarters nearest you.



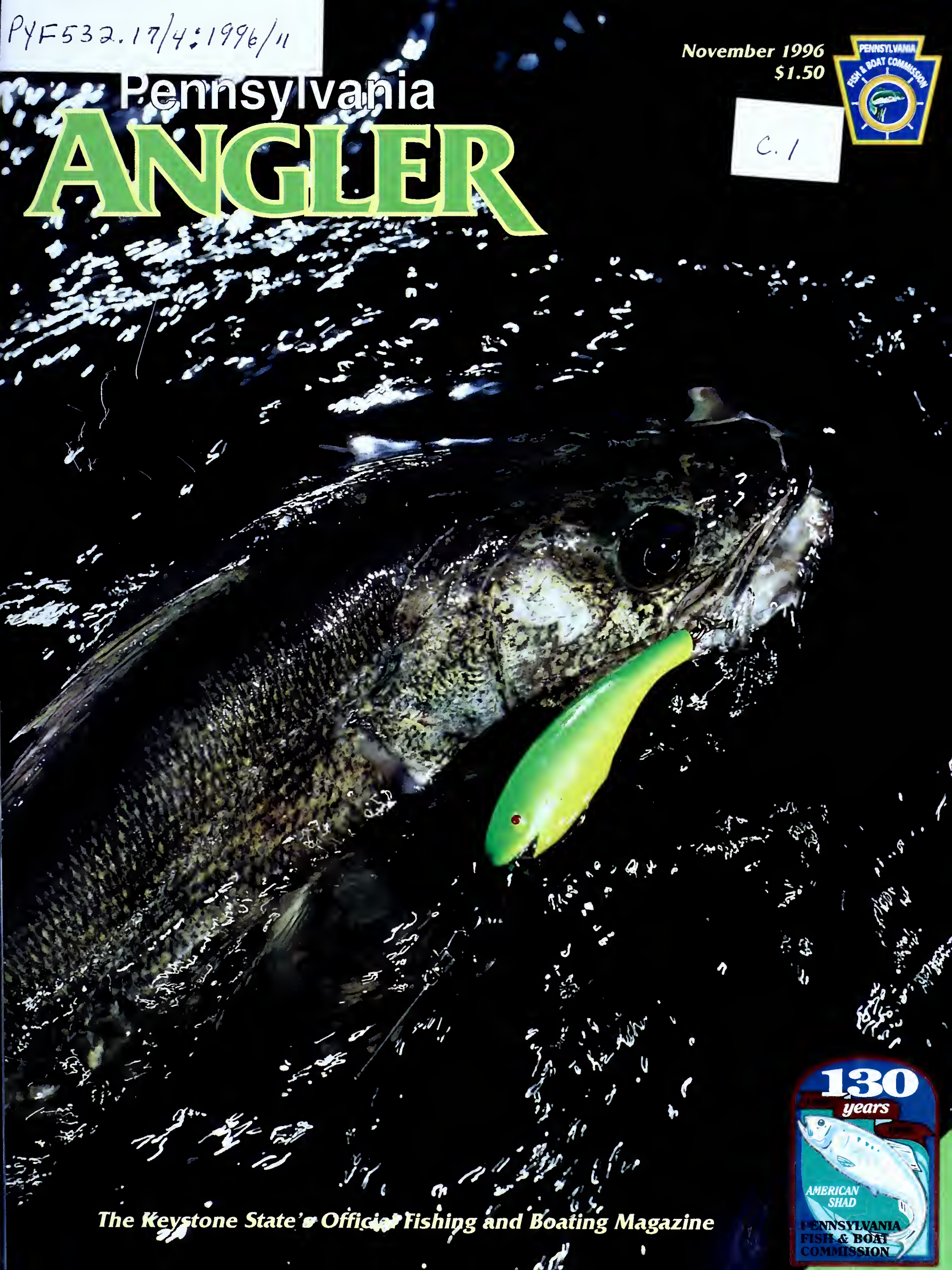
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Pennsylvania ANGLER



The Keystone State's Official Fishing and Boating Magazine





Regulatory Process at Work For You

When the General Assembly passed the Fish and Boat Code and earlier laws relating to fishing and boating, it entrusted a great deal of regulatory authority to the Fish and Boat Commission. The Commission has authority to make general and special fishing and boating regulations that cover a whole host of issues.

The anglers and boaters of Pennsylvania are important players in the regulatory process. Many regulatory initiatives are suggested by anglers and boaters. Once the Commission decides to go forward with proposed regulations, we regularly seek comments, suggestions and objections from the public, and these comments often affect the final form of the regulations.

For the most part, regulations proposed by the Commission attract little controversy. However, some proposed regulations do attract a great deal of interest, and in such cases, the Commission may offer extended public comment periods and conduct public information meetings or formal public hearings.

The package of new regulations for fishing tournaments that the Commission approved at our July meeting is a good example of the regulatory process at work. In the past few years, there has been increased interest in fishing tournaments, both by participants and sponsors on the one hand, and by persons who have concerns about the effects of such events on the resource and fishing and boating facilities. Use of Fish and Boat Commission property for fishing tournaments has required a permit for several years, and on other waters the majority of fishing tournament sponsors apply for special marine events permits under existing laws and regulations. In 1990, the Commission proposed a more comprehensive package of regulations on fishing tournaments, but after gathering public input, the Commissioners decided not to adopt these regulations on an evenly divided vote.

In 1994, then Executive Director Larry Hoffman directed the staff to renew the effort to draft comprehensive tournament regulations. Even before the first draft of these proposed regulations was completed, members of the Commission and staff invited interested anglers, tournament sponsors and groups with concerns about tournaments to provide suggestions at a public meeting of the Fisheries and Law Enforcement Committees. After considering this input, the staff assembled a package of proposed tournament regulations and asked the Commissioners to consider approving them for proposed rulemaking. At its January 1996 meeting, the Commissioners decided to seek public comment on this proposal. Because of the statewide interest, the Commissioners decided to provide an extended public comment period and two public hearings, one of which was held in Erie and the other of which was held in Harrisburg.

The Commission received 181 written comments on the proposed tournament regulations. Most came from supporters of fishing tournaments and contained suggestions for changes to one or more provisions in the proposal with an emphasis on the permit conditions. A few of the comments expressed concerns about the effects of tournaments on fishery resources and access to the resource by non-tournament participants. Public hearings were held on March 19, 1996, at Erie and March 21, 1996, at Harrisburg. The Erie hearing, which also took comments on proposed changes to bass

regulations on Lake Erie, attracted 139 attendees, of whom 31 made comments. The Harrisburg hearing was attended by 89 individuals, of whom 30 made statements.

After the conclusion of the formal public comment period, the Commission staff asked a number of those who had submitted comments on all sides of the issue to participate in a tournament regulation workgroup to review the text and assist the staff in putting together recommendations to the Commission on changes to the proposed regulation on final rulemaking. The workgroup met in Harrisburg on May 7. Its participants included leaders of some of the major tournament groups, as well as spokespersons for groups that have expressed concerns. The Governor's Sportsmen's Advisor, Vern Ross, two members of the Commission and several staff participated in a wide-ranging discussion of issues related to these proposed regulations. After the meeting, a revised draft was sent to all workgroup members for additional input, and the draft final regulations were discussed in detail at the meeting of the Commission's Fisheries Committee on June 21, 1996.

As a result of the public comment and the input received at the workgroup, the staff recommended several changes to the proposed tournament regulations. The major changes include a new definition of fishing derbies, clarification of several of the possible permit conditions, clarification of the culling provision, and minor editorial changes. The completed package was approved by the Commissioners at their July 1996 meeting, and the new regulations will take effect in 1997. The Bureau of Law Enforcement is sending a fact sheet to all groups who have sponsored tournaments in the past to make sure they are fully aware of the new requirements.

I've described the process by which these regulations took their present form to let you know how the Commission's regulatory process works. The detailed discussions of the tournament regulation workgroup helped clear up misunderstandings and assisted the staff in drafting an improved set of final regulations.

Are the new regulations perfect? Of course not. As in any divisive issue, there are people on both sides who are not completely satisfied with the final form of the regulations. In acting on these regulations, the Commissioners tried to take a balanced approach, mindful of the Commission's mission and trying to improve the current regulations. One area where just about everybody agrees that we need some change concerns fees for tournament permits. Our survey of anglers and boaters indicated that more than 75 percent support some form of tournament fee. Even more interesting is that the tournament sponsors themselves have expressed a willingness to pay a fee for these permits. Unfortunately, the Commission's authority to set permit fees by regulation is limited to a few categories of permits. It appears that the General Assembly will have to approve fees for tournament permits, and we may be asking them to consider such fees in the next session.

Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

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November 1996 Vol. 65 No. 11

Eight Southcentral PA Trout Stream Hotspots <i>by Charles R. Meck</i>	4
Hot Tactics for Big Brown Trout <i>by Mike Bleech</i>	7
Orange Water and Trout <i>by Mike Sajna</i>	10
A Burnt-Wing Quill Gordon <i>by Chauncy K. Lively</i>	13
Beginner's Luck <i>by Marilyn Dyne</i>	15
Commission Update	16
Lake Arthur Walleyes <i>by Darl Black</i>	17
Cast & Caught	20
PA Fish & Boat Commission Publications List	21
On the Water with Robert L. Petri	23
Buck Season Trout <i>by Vic Attardo</i>	24
Notes from the Streams	31

*The walleye on this issue's front cover was photographed
by Doug Stamm.*

**The New Pennsylvania
Angler & Boater Magazine**

Last month I mentioned our adding value to *Pennsylvania Angler* by including special publications as part of the magazine or by adding pages to the *Angler*, as we do when we include the *PLAY* newsletter.



The new *Pennsylvania Angler & Boater (PA&B)* magazine, beginning publication in January 1997, will continue to include these added value items. The main features of the new *PA&B* are that each issue will be 64 pages, not 32 as the *Angler* is now, and we'll print the 64-page magazine bimonthly, instead of monthly as we do now. We're publishing the same number of pages (384) each year that we've always printed in the *Angler*, only now we'll print bimonthly. The subscription rates remain the same as they are now.

The main reason for this change is that the Commission wants to bring *Angler* expenses more in line with its revenue. This change will save the Commission some \$78,000 in printing and postage costs.

There are several benefits to making these magazine changes, in addition to saving money. First, we've received letters from you over the years saying that you wished the *Angler* had more pages. Now it does! I'm particularly excited about the possibilities for widening and deepening our editorial coverage. You've probably noticed that our masthead list of regular contributors (just to the left of this column) grew from four last month to 13 this month. This change indicates the broad range of topics we'll cover in each 64-page magazine.

As always, I'm eager to hear from you on this change or on any aspect of the Commission. Next month I'll explain more about the new *PA&B*.—*Art Michaels.*



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Southcentral PA Trout Stream **HOTSPOTS**

by Charles R. Meck



Falling Spring Branch,
Franklin County



Blue-winged
olive dun

Some fly fishing friends and I traveled to Falling Spring Branch, near Chambersburg, Cumberland County, to fish while the famous trico hatch appeared. That morning I experienced a blizzard-like hatch of small tricos and saw trout feeding throughout a half-mile of stream. That hatch introduced me to some great fly fishing in southcentral Pennsylvania. I have returned many times to fish this same hatch since that initial introduction.

The trico hatch on Falling Spring has diminished since that trip, but it still brings some heavy streambred trout to the surface almost every day from late June through October.

I still remember vividly that first time I fly fished on the Yellow Breeches near Carlisle when the famous white fly hatch appeared. I sat back and watched in amazement at the number of anglers who came to this famous stream in late August just to fish this important hatch. Anglers crowded almost elbow to elbow waiting their turn to fish over rising trout.

But southcentral Pennsylvania has many, many other great trout streams, and some of these streams have few, if any, anglers on them after the first couple of weeks of the season. Many of them hold great hatches and rising trout throughout the fishing season. Let's check out a few of these southcentral PA gems.

Codorus Creek

What's a tailwater doing near Hanover? This small stream holds a good population of streambred trout and cold water temperatures throughout the season. If you hit this stream near Porter's Sideling in the special project water in late May, you're in for some great matching the hatch excitement. From late afternoon until dusk in late May, Codorus holds a respectable sulphur hatch. Trout often feed on or near the surface for the emergers and crippled duns. A tandem made up of a dun and an emerger tied two feet behind it works exceptionally well during this hatch.

You can expect to see sulphurs on Codorus until mid-June. But the Codorus contains much more than just a sulphur hatch. As early as April you can find little blue-winged olives and hendricksons emerging. And don't overlook great April hatches of caddisflies. Tan, gray and cream caddises abound on the Codorus in early spring.

You can reach the stream off PA 116. Then turn southeast onto Iron Ridge Road. Expect to see cold temperatures all summer long on this bottom-release water that empties from Lake Marburg.

Big Cove Creek

Just south of McConnellsburg, in Fulton County, anglers can find a hidden gem—Big Cove Creek. Big Cove Creek has some productive tributaries including Spring Run. This small limestone stream has a trico hatch every morning from early July through September. US 522 parallels the upper end of the stream and PA 928 follows the lower end. Once on the stream below Big Cove Tannery you'll find 30- to 40-foot-wide water with some good hatches throughout the year. In June and again in September anglers can fish over sporadic hatches of slate drakes.

Much of the lower end of the stream is fairly inaccessible, but you can reach a productive stretch near Big Cove Tannery on US 522. Below that area take PA 928. Each year this stream produces some heavy trout.

Yellow Breeches Creek

The Yellow Breeches Anglers and Conservation Association devotes an enormous amount of time to rearing trout and stocking Yellow Breeches Creek. Without this club and its active group of

members, the Yellow Breeches would not hold the trout it now does.

I have fond memories of the Yellow Breeches near the Allenberry Playhouse, a catch-and-release area. Just three years before, in early September, I fished to a great hatch of white flies. As I indicated earlier, often with this hatch you'll find hordes of anglers in August, but as the hatch wanes in September, so does the angling crowd. That evening only a few other anglers showed up for the hatch. As darkness approached trout began chasing the white fly emergers to the surface. I tied on a size 14 White Fly dry fly and a White Fly Nymph behind it. I caught more than a dozen trout that evening—about three-fourths of them on the nymph pattern.

What does that tell you about trout chasing the dry fly during this hatch? I ended the evening satisfied that I had finally solved the mystery of catching trout during this difficult hatch.

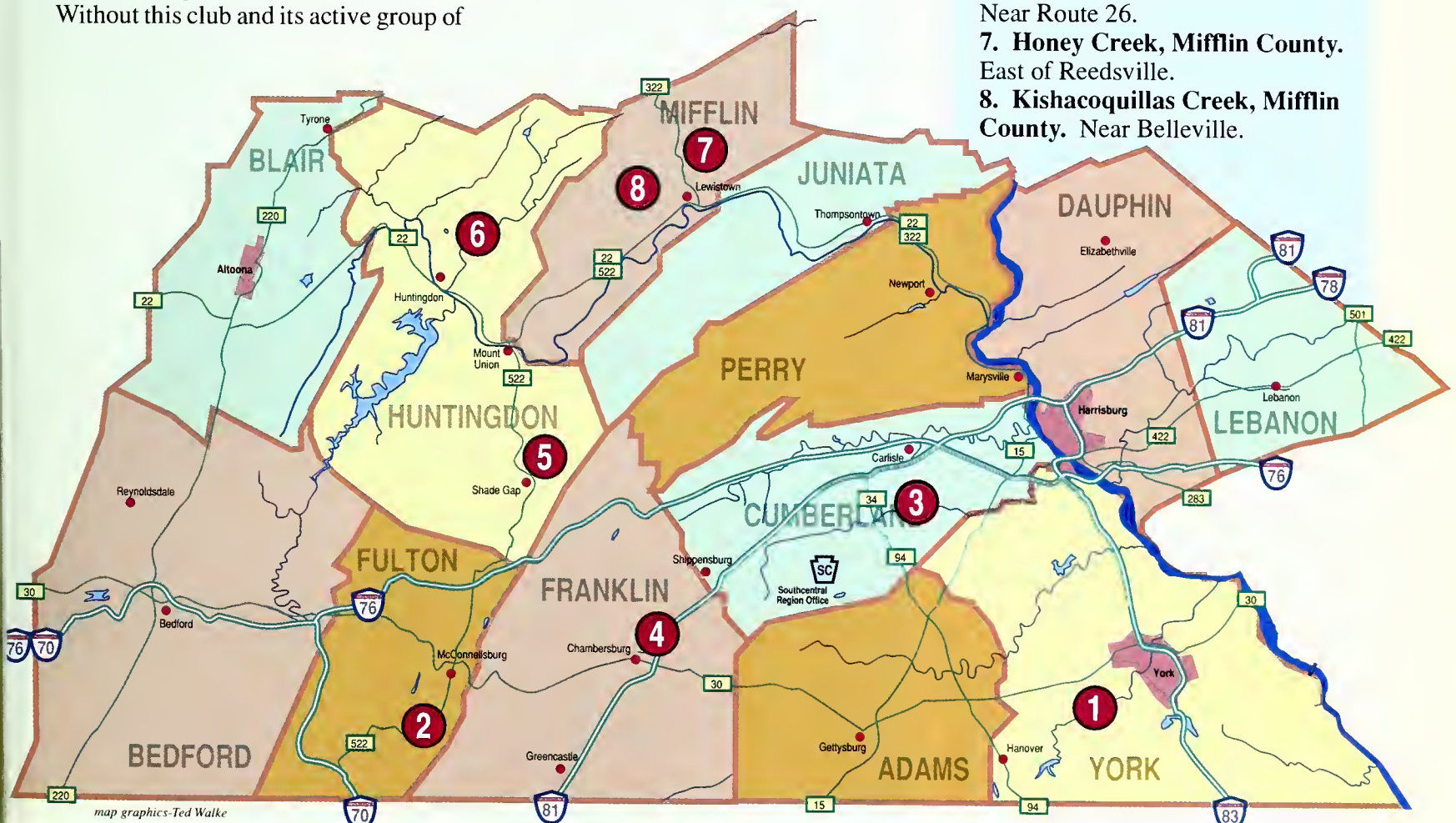
A week later a friend fished a couple of miles downstream out of the special-regulation water. That night he saw no white flies and used a tandem made up of a Patriot and a Bead Head Pheasant Tail Nymph. Within a half-hour he had landed and released four heavy trout. An angler across the stream watched him as he released his last fish and said, "Hey,

buddy, there's a fly stretch upstream—why don't you go up there and catch your fish?"

Just as Falling Spring has more than the trico hatch, the Yellow Breeches has more than a white fly hatch. Beginning in April the stream holds hatches of hendricksons and blue quills. Even into late June and July you can fish over hatches and rising trout. In mid-June and late June you can find some yellow drakes on the

Eight Southcentral Trout Stream HOTSPOTS

- 1. Codorus Creek, York County.** You can reach the stream off PA Route 116, then turn southeast onto Iron Ridge Road.
- 2. Big Cove Creek, Fulton County.** Just south of McConnellsburg.
- 3. Yellow Breeches Creek, Cumberland County.** At Boiling Springs.
- 4. Falling Spring Branch, Franklin County.** Near Chambersburg.
- 5. Blacklog Creek, Huntingdon County.** South of Orbisonia off U.S. Route 522.
- 6. Standing Stone Creek, Huntingdon County.** Near Route 26.
- 7. Honey Creek, Mifflin County.** East of Reedsville.
- 8. Kishacoquillas Creek, Mifflin County.** Near Belleville.



map graphics-Ted Walke

8 Southcentral PA Trout Stream HOTSPOTS

surface at dusk, and in July you can even see some tricos.

Falling Spring Branch

Wow! What memories this stream holds for me each time I fly fish it! I still vividly remember one of my first trips to this 20-foot-wide limestone stream to fish the famous trico hatch. I had gone with several angling friends. I sat back and watched one buddy fish over a dozen risers to size 24 trico spinners. He had trout rising in front of him, behind him, and across from him. For more than a half-hour we watched this angler cast over one trout after another and become more frustrated as the spinner fall grew more intense. Finally he gave up on these trout and challenged the three of us watching to try to catch one of these selective fish. We, too, had little success in duping one of these large trout into taking a size 20 Trico pattern.

The trico hatch has diminished somewhat since I first saw it 30 years ago, but it still brings trout to the surface from late June through much of October.

Falling Spring Branch has many other great hatches. Anglers fly fish this stream regularly and find hatches on the stream from March through November. Little blue-winged olive hatches appear in early spring and again in fall and create some great fly fishing on the stream. In late May Falling Spring hosts a tremendous sulphur hatch that continues into early July. Every evening you'll find some of the heavy streambred rainbow trout rising to this size 16 mayfly.

Falling Spring Branch begins near Fayetteville and flows northwest through Chambersburg. SR 2029 parallels much of the stream's upper end. The stream has two regulated areas. In the upper area you'll find them—four miles of Heritage Trout Water with no-kill restrictions, and on the lower end, in Chambersburg, there's a one-mile Delayed-Harvest, Artificial-Lures-Only section.

Blacklog Creek

Blacklog Creek is situated in an isolated valley near Orbisonia. It is a gently flowing 30- to 40-foot wide freestone stream, and it gets plenty of angling pressure early in the season. But by the time June arrives, you'll find few anglers. Its up-



Yellow Breeches catch-and-release area

per reaches Blacklog holds a good population of streambred brown trout and native brookies.

You'll find some decent hatches on the stream beginning as early as the opening of the trout season. Blue quills usually appear in early April and continue through much of the month. In May anglers find March Browns, sulphurs, light cahills and even some green drakes.

It's easy to reach this stream. It's located off US 522 just south of Orbisonia. SR 2017, Blacklog Valley Road, parallels the stream for more than 20 miles.

Standing Stone Creek

I fly fished on Standing Stone Creek on opening day a few years ago. I used a large Bead Head Woolly Bugger in the high, cold April water. In a pool several miles downstream from McAlevys Fort, my angling partner landed a 20-inch palomino on that early season pattern.

But shortly after my friend landed that trout, we began to see a few mayflies on the surface. Those few mayflies soon expanded into one of the heaviest opening day hatches I've ever witnessed. By 2 p.m., thousands of hendricksons paraded past us on the surface, unable to take off because of the cold early season air temperature. Within minutes some of the recently planted trout began feeding on dazed hendricksons on the surface.

My partner and I quickly removed the heavily weighted bead head patterns and tied on Red Quill imitations to copy the male dun. We didn't have to wait long for the action to begin. A trout just a few feet in front of me took the imitation readily. Then another took the pattern. I walked downstream looking for additional risers.

By 4:00 p.m. the hatch diminished and the few trout that rose before abruptly quit. But what an opening day hatch!

The hendrickson is spectacular on Standing Stone Creek, but the stream holds other hatches. Even into late June you'll find some Yellow drakes. You'll also find

sulphurs, slate drakes and light cahills.

Standing Stone Creek has at least two personalities. In its upper reaches, above McAlevys Fort, you'll find a heavily forested stream with plenty of cold water and native and streambred trout. Below McAlevys Fort the stream flows through farmland and warms quickly. By early June water temperatures in much of the lower end have risen above 70 degrees.

Standing Stone Creek begins near Alan Seeger Natural Area. Here you'll find a heavily forested stream with plenty of native brook trout. Some of its tributaries in the upper area also hold a good number of trout, including streambred browns. You can reach the lower end on PA 26. SR 1023 accesses much of the upper end. You'll find some posted property on the upper end just below the state forest.

Honey Creek, Kishacoquillas

Near Lewistown, anglers can find several productive limestone streams. Kishacoquillas and Honey are two of the larger streams. I have become intrigued with Honey Creek the past few years and travel there in early June to hit the two drake hatches the stream holds. In one evening several years ago I found green and brown drakes appearing in good numbers for two evenings. I have not found brown drakes on Pennsylvania streams farther southeast of Honey.

You'll find exceptionally cold water on Honey Creek, especially on the upper end. Upstream from this limestone creek, a freestone creek, Treaster Run, joins. The stream goes underground and reappears as a limestone stream. Honey holds a good supply of streambred brown trout and good hatches throughout the year. But the best hatches appear in late May and early June. At that time, in addition to the drakes, you'll find gray foxes and blue-winged olive duns emerging.

What a choice we have! Southcentral Pennsylvania has it all—and much more.

HOT TACTICS

for Big Brown Trout

by Mike Bleech



photo-Mike Bleech

Big brown trout are among the most cherished prizes in sportfishing. Part of their attraction is the tradition that goes back to the European roots of many Americans. But far more meaningful is the challenge these fish present. The biggest browns in any waterway have avoided countless attempts by anglers to fool them. But they can be fooled.

Logic leads to the conclusion that if many, many anglers, most using the same few basic tactics, fail to catch these big browns, the way to catch them lies in different tactics. Here are a few tactics that have proven effective on trophy brown trout.

Fall is one of the best times to fish for big browns. Brown trout spawn during late fall or early winter. This gets them moving during fall, funneling them into a line toward the spawning streams. They are aggressive during this pre-spawn period. They might stop feeding just before they spawn, but up to that point, they certainly feed.

These same fishing patterns re-emerge during spring, when big browns are again aggressive and moving, except that these fish do not move into the smaller streams where they spawn. They will, however, feed aggressively and be in most of the same areas.

Get away from fishing pressure

Brown trout, any fish for that matter, have increasingly better odds of growing to trophy proportions as fishing pressure decreases. With so many anglers, it can be difficult to escape fishing pressure in Pennsylvania, so you have to be prepared to expend more effort than most anglers.

Float fishing is the simplest way to get away from the main pressure points. On the middle Allegheny, for example, trout fishing pressure is congregated in the Kinzua Dam tailwaters and along Dixon Island, the first island below the dam. Float a few hundred yards farther downriver and you have escaped at least 75 percent of

HOT TACTICS for Big Brown Trout

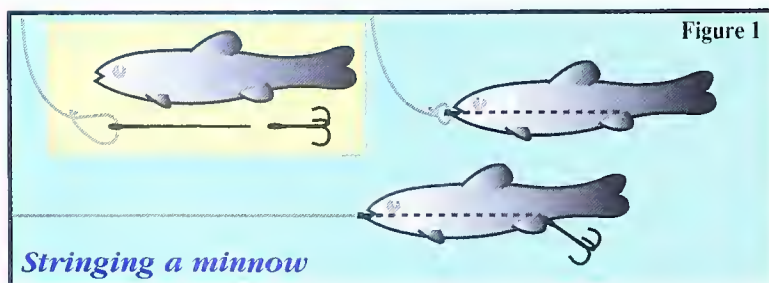
the fishing pressure. Trout fishing can be good for another 20 miles downriver.

If you want to catch really big browns, offer them a meal fit for a big fish. Once brown trout reach a reasonably large size, and depending on the water they inhabit, their diets are composed more and more of smaller fish. Minnow-shaped lures are excellent. For Allegheny River browns, which are often four to six pounds, sometimes a few pounds larger yet, six-inch minnow lures are excellent. In waters where the top end browns are smaller, try four-inch lures. Use a stop-and-go retrieve to simulate an injured fish.

Spoons are also excellent lures for big browns. Gold spoons with bright-red or orange trim are particularly good during fall. Spoons can be cast much farther than minnow lures, and they can be retrieved at virtually any depth by counting them down.

One problem about fishing the larger, floatable creeks and rivers is that the browns can be just about anywhere. There will probably be big browns in the riffles, the slicks and the pools all at the same time. Float fishing partially solves this problem by covering a lot of water.

Artificial lures cover a lot more water than you can properly fish with bait. Yet, it is a good idea to carry bait. If you get a big brown to follow a lure, but it will not strike, offer the fish a lively shiner or a big nightcrawler. Shiners are better, though a bit more bother. But any brown that is at all interested in your artificial lures will probably not pass up a freshly hooked shiner, wiggling and shedding scales. Use larger shinners than you might normally use for trout fishing, at least four inches in length.



Tailwaters trout

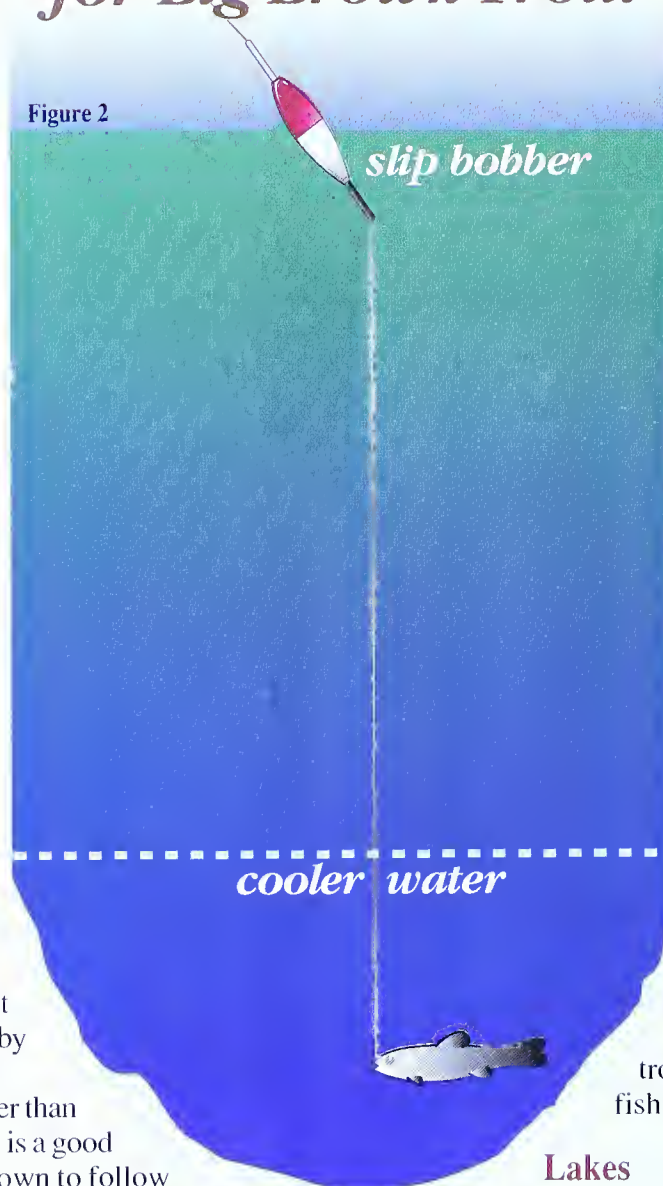
Dams create excellent fall and spring hotspots because they stop migrating browns. During fall, browns move upstream in search of spawning habitat. Their intense urge to get upstream rivals that of salmon. I have watched them swim frantically 30 feet up the face of Kinzua Dam in a thin stream of water. During spring, the browns are again on the move, though many may have lingered in the tailwaters through winter.

Browns may linger in the dam tailwaters for some time trying to find a way around it. They will begin arriving by late

September. By New Year their activity is winding down. Then in April and May they again become more aggressive. This phenomenon occurs on several creeks and rivers that are not otherwise noted for brown trout fishing. When they are spread out, they are hardly noticed. But during fall and spring most of the big browns in an entire creek might congregate in the tailwaters of a dam.

Because of the swirling waters and cross currents in the tailwaters of a dam, artificial lures or quick-strike bait rigs are best. Any bait rig with which you must let the trout hold the bait even a short time before setting the hook will result in few hook-ups. They feel the currents pulling the line, and drop the bait.

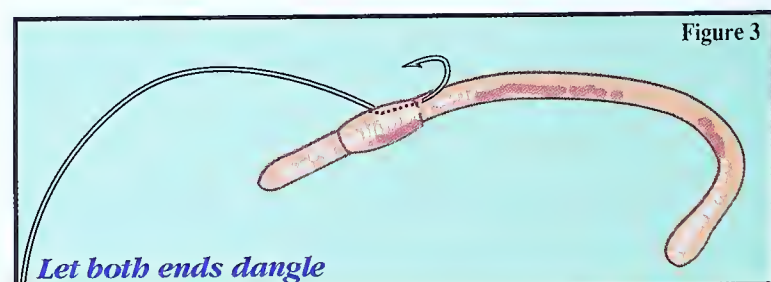
My preference is stringing minnows, a method which uses a long bait needle to thread the line into the mouth of the minnow and out the vent (see Figure 1). A treble hook is attached to a loop at the end of the line, and the line pulled snug with one barb of the treble hook inserted in the minnow between the vent and the tail. This rig is particularly effective in dam tailwaters because the trout are accustomed to feeding on small fish that are swept through the dam.



Lakes

Mature brown trout leave lakes to spawn in tributary streams. During summer they have been scattered throughout the lake, primarily in deeper, cooler water where catching them is much more difficult. They move into shallow water and become quite aggressive weeks before moving into the tributaries. Then they gradually begin to congregate near the tributary mouths before actually entering them.

In lakes and reservoirs such as Raystown, Wallenpaupack or Allegheny, the brown trout population is not dense enough to provide a good fishery during most of the year. But when the browns begin moving toward tributaries it is another matter. And it is in these lakes where you are most likely to encounter the biggest browns in the state. The current state record was caught in the tailwaters of the Raystown Dam, and experts suggest that this fish probably came through the dam shortly before it was caught. The previous state record brown trout came from Lake Wallenpaupack.



Lake Wallenpaupack and Raystown Lake are almost certainly the most likely waters in the state to produce really huge browns—fish that weigh over 12 pounds, and maybe as much as 20 pounds—because they have high-protein forage bases. Shad, alewives and smelt put more pounds on predator fish than any of our other small forage fish such as shiners. Attempts were made to establish smelt in the Allegheny Reservoir, but the smelt never thrived.

Two very different approaches to this situation can put you in a very good position to catch the brown trout of a lifetime. One targets specific spots, the other covers a lot of water.

When the water temperature drops into the high 50s, sometimes by the low 60s, browns move out of their deep summer haunts into shallow water. Until they arrive at the tributaries, trolling may be the most likely way to catch them.

Use a planer board to keep lures away from the boat. With two anglers in a boat, run a planer board toward the shoreline. By running the planer board toward shore you keep the boat out of shallow water where it is most likely to scare browns. Rig three lines from the planer board, and the fourth straight behind the boat. Though most browns will probably avoid the boat, some might be attracted to the swirling prop wash.

This is probably the best approach to big browns during spring. Instead of congregating near the tributary mouths as they did before the spawn, the browns are in shallow water to feed. Shallow water warms quicker than the rest of a lake, attracting schools of shiners, shad, smelt and other forage fish.

Still-fishing with live minnows right at the tributary mouths is another effective way to find big browns as they make their annual spawning migrations. Use shiners four to five inches long, hooked lightly behind the dorsal fin. Leave a shiner on the hook only as long as it is lively. Then replace it.

Tributary mouths are typically in V-shaped bays, which means that the water depth is highly variable. When the tributary water is cooler than the lake water, the water entering the lake flows under the warmer water, in the bottom of the V. This is where the big browns will likely be. Use a slip bobber to suspend the bait in this cooler water (See Figure 2).

This situation also applies to many of our smaller stocked trout lakes that are deep and cool enough to hold trout through summer. Bait fishing can be done the same as in larger reservoirs. Trolling, however, should be scaled down. Gas-powered motors are not allowed in many of these lakes, so you must troll with an electric motor. This is not a disadvantage in small lakes. In fact, it is probably an advantage because electric motors



Productive lures for big brown trout have some bright-orange or red in their patterns.

and smaller boats are not as likely to disturb trout as larger boats with gas powered motors.

The top-end browns in these smaller lakes will not be as big as in our larger reservoirs. A 20-inch brown should be considered a real prize. So lures should also be scaled back, but not so far back as you would use for bucket trout. Try minnow lures and spoons three to four inches long.

Small-stream tactics

Catching big browns in small streams is a different matter. Using normal fishing tactics, older, larger brown trout are virtually uncatchable in smaller streams. Approaching them is difficult in low, clear water. They probably feed mostly at night, spending the rest of the time hidden under log jams, undercut banks and other cover.

Even though there are far more big browns in small streams than most anglers imagine, do not expect to find them in every pool. Be suspicious of any great-looking pool where you have difficulty catching smaller trout during the day. A big brown might own it. The better pools are usually deep, in relative terms, with good cover. A big brown must have somewhere to hide.

Under normal stream flow conditions, night is the most likely time

to hook big browns in smaller streams. Night fishing is difficult, though, which is probably the reason the night feeders survive longer. It is highly unlikely that any fish has the intelligence to feed at night to avoid anglers. More likely, those browns that feed at night have a better chance of survival.

Night fishing tactics should be refined to make them relatively easy to perform in darkness. Fancy casting is out of the question, and generally unnecessary. This is the time the big browns are on the prowl, so they will find the bait if you get it anywhere near them. In a very small stream, this means just getting the bait in the same pool.

Keep rigging simple, because when you lose a rig to a snag, and you will, you must replace it only with the light of a small flashlight. Avoid any bright lights that might alert the browns. Never let the light beam hit the water. Be careful that the light does not reflect back onto the water from a shiny piece of fishing gear, or from leaves.

Nightcrawlers are as good as any bait for night fishing during fall. Hook them once through the collar, letting both ends dangle (See Figure 3). If you miss fish because they nip at the ends, don't worry—those fish aren't the ones you're after. The dangling 'crawler looks and acts naturally. Cast the 'crawler near the upper end of the pool and let it drift. If it settles on the bottom, let it sit there for a few minutes.

ANGLER

Orange Water and Trout

by Mike Sajna

Standing along Cowanshannock Creek in Rural Valley, staring into thick stands of alder that bring to mind woodcock, it is tough now to imagine the tipples and coke ovens that until the Great Depression dominated life in the Armstrong County town. It is tough to imagine, but in western Pennsylvania it's not difficult to believe.

Michael Musmanno, former Pennsylvania Supreme Court Justice and a judge at the Nuremberg trials of Nazi war criminals, came from a mining family and captures the feel of such coal towns in the 1920s in his book *Black Fury*. Even though the novel's protagonist was born into the setting and expected to dig coal for a living,

he still cannot help but feel troubled by the world around him:

"He never failed to feel dismayed as he watched all vegetation in Coaltown being destroyed by the dragon in its midst, a dragon whose nostrils breathed out locomotive flame-shot smoke, slag mountain fumes, and dirt and dust of the mine."

Raw economics long ago strangled most of Pennsylvania's coal industry, and reclamation efforts over the past couple of decades have cleaned up much of the left-behind debris. But one all too familiar legacy that remains is orange-tinted, acid mine drainage-polluted streams. Pennsylvania has almost 2,600 miles of streams and rivers degraded by acid water from abandoned coal mines, more than any other state in the Appalachian coal region.

Every thinking angler has at one time or another most likely looked at a mine-polluted stream and has been saddened, perhaps angered, by Pennsylvania's past. The sight is particularly disturbing when it involves such picturesque waters as the Bennett Branch and Sinnemahoning Creek in the big woods country of Elk, Cameron and Clinton counties.

Even though cleaning up such waters is far beyond the capability of anglers alone, two groups of Armstrong County fishermen have found an almost unbelievable way to use an acid mine waterway to improve the fishing in their area.

"There are 3,000 fish in this one and 3,000 in this one, actually 3,060. They [the Fish and Boat Commission] gave us 60 palominos," says Joe Mercurio, president of the Ford City-based Arrowhead Chapter of Trout Unlimited as he proudly shows off the twin concrete block raceways of the trout nursery his club and the Shannock Valley Sportsmen's Club operate in Rural Valley.

The nursery is part of the Fish and Boat Commission's Co-operative Nursery Program. Under the operational agreement,



Springwater emanating from a mine is used for Arrowhead and Shannock Valley cooperative nursery trout.



Arrowhead TU chapter member Jeff Lipniskis helps the cooperative nursery stock some 6,000 trout annually in local streams.

the Commission supplies fingerling trout and technical expertise to the clubs, which in turn provide financial support and labor to build and maintain the nursery, and raise and stock the trout.

Fish from the nursery are used to stock streams open to the public, but often not directly stocked by the Commission because the streams do not meet minimum size or flow criteria. Over the years, fish from the Rural Valley nursery have gone into such local waters as Buffalo Creek, Cowanshannock Creek, Crooked Creek and Mahoning Creek. Armstrong County Waterways Conservation Officer Bruce Gundlach says the project has been a benefit to local trout fishing because it has opened up new streams or sections of streams.

"Any time you increase the numbers of fish in local streams by 6,000 something, that's going to help," Gundlach notes.

According to Tom Rocco, owner of the

property on which the nursery stands and a member of the Shannock Valley Sportsmen's Club, the idea for using the acid mine spring on his land for a trout nursery originated in 1983-1984 with the Cowanshannock Watershed Association, a local conservation group. At the time, the association was using a pond in the area to raise trout. When the pond dried up, the association asked to try the mine spring on Rocco's property. Rocco also manages the hatchery on his property.

From monitoring work conducted by local coal companies, the watershed association was aware that the spring had potential as a trout nursery. Its pH level ranges from 5.5 to 6, with 7 neutral, and aeration, dissolved oxygen content, from 5 to 6.5 parts per million. A high figure would be 10 or 11 parts per million. Both levels are marginal, says Cecil Houser, manager of the Commission's Co-operative

Nursery Program. But the water has something else in its favor. It has an excellent temperature for raising trout.

The spring flows at a steady temperature of 52 to 55 degrees year-round. Even in prolonged periods of high temperatures and drought, the nursery has produced some "great fish," according to Arrowhead's Mercurio. During the drought of 1995, when nurseries and hatcheries all over the state were losing fishing, the Rural Valley nursery produced 13- and 14-inch brook trout.

The spring's most evident problem, its orange tint, is mainly ugly and not a serious problem, according to both Houser and Mercurio. It is caused by iron leached out of surrounding rocks by the acid water and in itself is not deadly to fish, even rather delicate trout.

"Iron doesn't hurt trout," Mercurio explains. "It messes up the water in that it will coat vegetation and fly life and everything else. You don't want iron in the creek for that reason. But we're feeding our fish. We don't have to worry about mayflies in the raceways."

One element that is a worry, though, is dissolved aluminum. Roughly eight percent of the earth's surface is comprised of aluminum. When coupled with a low pH, dissolved aluminum can kill fish by attaching to the gills and inhibiting breathing. The Rural Valley nursery is within the safe limits for aluminum content, but high levels of the element could prevent other clubs from using a similar mine spring for a nursery, Houser says.

A minor problem the nursery routinely has to deal with involves the acclimation of the trout to their new homes. Since the fish are going from a high pH environment at the Reynoldsdale Hatchery to a low pH environment in the nursery, Houser says they have to be "tempered" before they are introduced into the raceway or a number of them could die from the shock. Tempering is done by slowly changing over the water in the truck to nursery water. It takes about an hour.

The Shannock Valley Sportsmen's Club and Cowanshannock Watershed Association began using the spring to raise trout on their own in the mid-1980s. At first, they simply placed cages in the spring run. The Commission required the placing of cages to test the ability of fish to live in this water source before going to the expense of building a raceway. The club then added a raceway and other improvements when it joined the Commission's Cooperative Nursery Program in the late 1980s.

Arrowhead Trout Unlimited became

Orange Water and Trout

involved in the project in 1994 after its Conservation Committee Chairman Herb Barch heard that the Shannock Valley Sportsmen's Club had encountered financial difficulties and was thinking about dropping out of the cooperative nursery program. Barch approached Houser to discuss the possibility of the Arrowhead chapter taking over the nursery for a year.

"We worked with them, and then, after they saw the benefits, they decided to build their own raceway," says Houser. "We worked with them supplying plans and making visits and a number of phone conversations to help them develop everything."

The Arrowhead chapter operated the nursery alone in 1994, and then was re-joined by Shannock Valley club last year, when a second raceway was built. In addition to the two clubs, support for the project has come from the FishAmerica Foundation, the Armstrong County Recreation Authority, the Tri-County Private Industry Council, and Wildlife Forever.

Since Shannock Valley and Arrowhead have joined forces, they have been able to add timber walls to the channel feeding the nursery, settling pools to remove iron, and water wheels to agitate the flow and improve aeration. This past summer, Arrowhead also added a regenerative blower to increase the aeration.

"The main idea is to get the iron to settle out as much as possible," says Tom Turiak, the Arrowhead member who handled some of the construction work. "By adding oxygen you pull a lot of the iron out and it settles in the pools. As it comes down, it gets less and less orange. That's because of the settling of the iron due to oxygenation and gravity."

Over the past two years, Arrowhead, the Private Industry Council Youth Services Group and friends of the chapter and sportsmen's club have spent an estimated \$16,000 on the nursery. But not all of that money and work has been solely for the benefit of trout and anglers. As Brian Flowers, a crew supervisor for the Tri-County Private Industry Council, notes in a video produced by Arrowhead on the project:

"This was a good experience for my crew because they could see the practical aspects of doing something and how it benefits the community, how it benefits the environment."

Lisa McCanna, director of the youth council, adds: "We especially liked this project because there were a lot of innate learning opportunities in it for the kids."

For instance, she points out, "the kids were able to work with probability and statistics by determining how many fish could be put in the nursery and expect to survive and be released in a stream. They also learned about construction and erosion control while having a really nice time."

According to Houser, there are a few other cooperative nurseries around the state that are using water within old mining areas, but the Arrowhead/Shannock Valley project is unique, the only one that uses water directly from a deep mine to rear trout. Houser says that there is potential for other clubs around the state to operate a cooperative nursery using such water and that the Fish & Boat Commission is ready to work with them.

"I commend the clubs for their efforts and all of the work they have done to enhance the project and make it even better than it had been in the past," Houser adds. "They've put a lot of time and money in it, and they do it all practically at their own expense."

Clubs interested in learning more about the cooperative nursery program should contact: Cecil Houser, Pennsylvania Fish and Boat Commission, Cooperative Nursery Unit, 450 Robinson Lane, Bellefonte, PA 16823.



Cooperative Nursery Program in a Nutshell

- The Cooperative Nursery Program's roots go back to 1932 when it was initiated by the U. S. Bureau of Fisheries, with fish provided by the PA Department of Fisheries (now the PA Fish & Boat Commission). The Commission took over running the program in 1961 and set up the present format in 1965.

- The program has grown to include 158 sponsors operating 191 nurseries statewide, rearing primarily trout and steelhead, and also striped bass, walleyes and largemouth bass for stocking in waters open to the general public.

- Sponsors rear fish that are furnished by the Commission's fish culture stations and stock the fish in waters for the general public and for special events. The Cooperative Nursery Unit staff monitors each nursery and provides technical advice on all phases of the program.

- In 1995 the salmonid nurseries stocked 1.2 million trout in 50 counties, at a weight of 346 tons, and an average fish size of 12 inches. In addition, there were 3,280 largemouth bass, 70,000 walleye fry, 2,000 walleye fingerlings and 25,000 striped bass fingerlings stocked.

Arrowhead TU president Joe Mercurio hoists a net full of trout for stocking. Above, water runs in "steps" from the springhead to the raceways.



A Burnt-Wing Quill Gordon

by Chauncy K. Lively
photos by the author

Here is a mayfly with dual names. To many it is the "Quill Gordon" (after Theodore Gordon). Others, including Ernest Schwiebert, call it the "Gordon Quill." There is even a duality in its scientific name. Entomologists formerly classified it as *Iron Fraudator*, but it is now known as *Epeorus Pleuralis*. It is one of the better-known mayflies inhabiting Catskill streams and it also appears in scattered Pennsylvania waters, although many observe that its numbers have been declining in recent years.

Quill Gordon nymphs are clingers with flat bodies well-adapted to hang onto rocks or other submerged objects in swift water. Unlike the many surface-emerging mayflies, they emerge at the stream's bottom and swim to the surface, where they break through the film, float briefly and fly away. Like caddis flies, a covering of microscopic hairs forms a thin layer of air around the submerged insect to prevent its drowning. An early-season emerger, the Quill Gordon generally precedes the Hendrickson. In Pennsylvania's northern counties it is not unusual to encounter it on opening day.

Traditionally, quill bodies in artificial flies have been fashioned from fibers stripped from the "eye" of a peacock tail feather. A single fiber is wound in consecutive turns to form a banded abdomen, which simulates a segmented body typical of many mayflies. Peacock quill bodies are very realistic, but they are also extremely fragile. Sometimes fly tiers counterwind these bodies with fine gold wire to improve durability, but this process diminishes the fly's realism. In the February 1992 *Angler* I described a new type of quill body fashioned from a narrow strip of prepared polyethylene film. I have used this body extensively for several years, and it has proven itself in terms of both effectiveness and durability. We use it again in this month's pattern.

Polyethylene film is an inexpensive clear-plastic material commonly sold in rolls or sheets at discount stores for tarps or outdoor furniture covering. I cut 2-



inch x 6-inch working sheets from the film and sand each side gently with fine sandpaper until the sheen is gone and the film is uniformly whitish. Then I tint the film sheets with a tan marking pen. The film will not accept tinting unless it is first sanded. Following tinting I use a fine-pointed black ballpoint pen to scribe parallel lines 1/16-inch apart along the long dimension of each sheet. Then, with a straight edge and razor blade, I cut strips 1/16-inch wide, which show one dark edge. These are the quill strips.

Dry flies with fully shaped wings have come into their own in recent years, following considerable study and experimentation by several leading fly tiers. The prominent, tall wings of the mayfly are a dominant feature readily seen in the trout's window. In fact, the tips of the wings are the first aerial image seen by the trout as a floating mayfly approaches. Several types of full-form wings may be used by the fly tier: Wonder-wings (from hackles with fibers inverted), cut wings (shaped from webby hackles) and burnt wings, fashioned from webby hen back feathers with the unusable bottom fibers stripped off.

Wing-burning tools resemble tweezers with flat plates shaped like mayfly wings at one end. In use, a feather is clamped between the plates and the exposed edges are burnt with a match or lighter. When the tool is opened the remainder of the feather is now the shape of the plates. With

flat feathers two wings may often be burnt together. If the feathers are somewhat concave, it is better to burn the wings separately. Just remember to make a right and a left wing.

In most burnt wings the hackle stems are positioned lengthwise. However, in our Quill Gordon we use wings designed by Ken Iwamasa, which use a radically different approach. Here the feather is angled in the tool—actually, tilted to the left—so that the bottom fibers on the right of the stem align with the right edge of the plates. After the wings are shaped they are matched "face to face" with concave sides together as a single upright wing. Then the exposed stem bottoms are cemented together with Krazy Glue.

Before mounting the wings I apply a light coating of Grumbacher's Tuffilm fixative or similar art spray. Care should be taken to avoid soaking the wings with spray because they will likely warp as they dry. I hold the spray can about 20 inches from the wings and apply with several short spritzes with intervals between.

Instead of hackle we use thin deer body hair to represent the pattern's legs and to provide support on the surface film. The hair not only contributes to good flotation, but it is virtually trouble-free.

Burnt-wing dry flies are well-known for their effectiveness in tough conditions. Besides, it's fun to use a fly that actually looks like a real mayfly on the water. That's an added bonus—even when the trout seem to be in the doldrums.

Dressing: Burnt-Wing Quill Gordon

Hook: Size 14 regular shank, fine wire.

Thread: Yellow 8/0 Unithread.

Tails: Four gray microfibers split into pairs.

Abdomen: Prepared tan polyethylene quill strips.

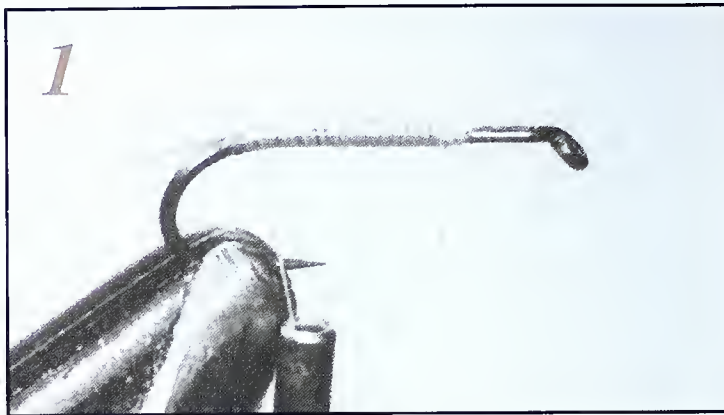
Legs: Thin natural deer body hair.

Wings: Burnt to shape from two medium dun hen back feathers.

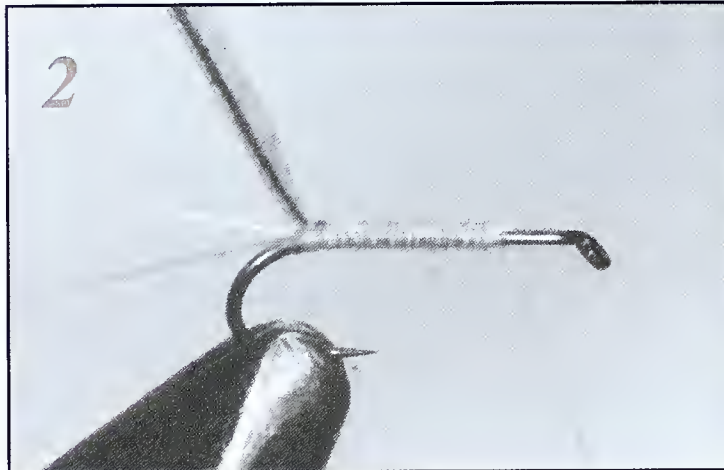
Thorax: Dubbing of medium gray fur or synthetic.

A Burnt-Wing Quill Gordon

1. Tie in the thread behind the eye and wind back to the bend. Tie in the tails, split them into two pairs and wind between with criss-cross winds.



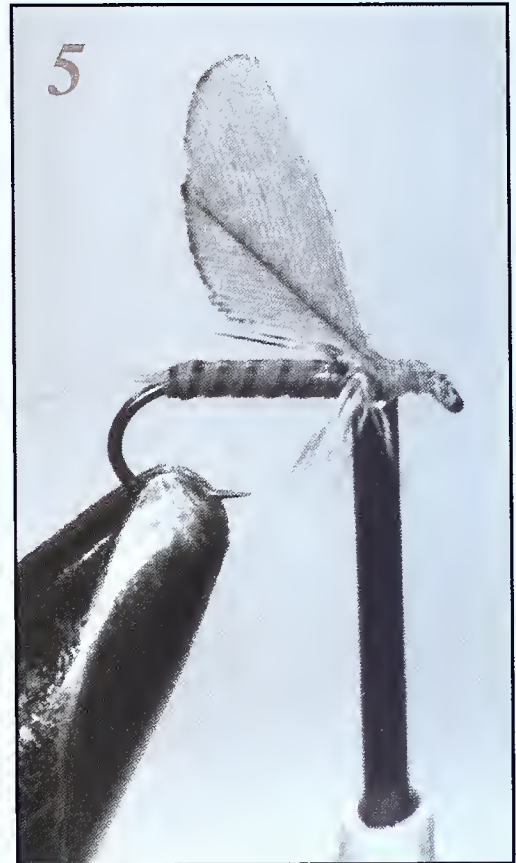
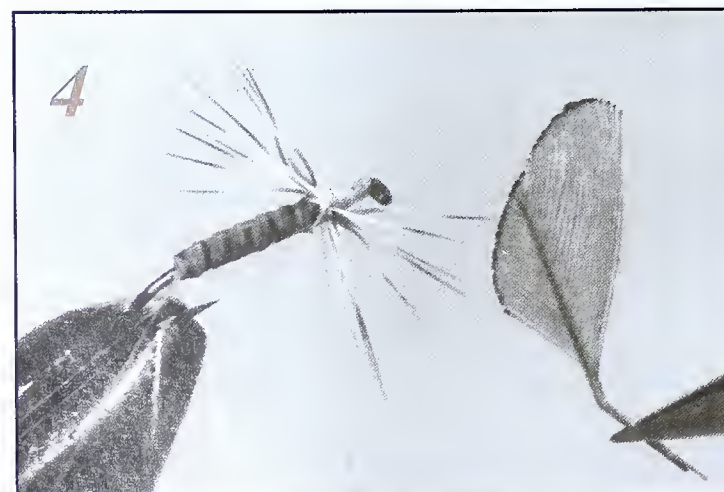
2. Cut a taper in one end of the quill strip and tie in that end at the bend, at a right angle to the shank and the dark edge toward the tails. Wind the thread forward to the original tie-in.



3. Coat the shank with Flexament and wind the quill strip forward 3/4ths the shank length and tie off. Trim the excess. Coat the quill body with Flexament. Cut a sparse bunch of deer hair and even the tips. Tie in the hair at the fore end of the body and trim the excess butts.



4. Separate the hair into equal halves and wind between to set the hair extending outward on both sides. Apply a drop of Flexament to the bases of the hair legs and when partially set, squeeze flat with tweezers. Form a matching pair of wings with a wing burner and cement the stems together.



5. Tie the wings in place and check their alignment by looking from front to rear.



6. Wax the thread and make a twist dubbing. Bring the working thread forward of the wings. Then make criss-cross turns of dubbing around the wings and tie off behind the eye. Trim the excess dubbing, wind a neat head and whip-finish.

Beginner's

Luck

by Marilyn Dyne



Craig (left), Ted and the author.

He was an old man. That was all I could tell from a distance. As I moved closer, I could see the lines of life deeply embedded in his hardened face. A day's growth of beard tried to hide the pleated lines around his mouth, and his teeth obviously had been abandoned on the bathroom sink. A tall man, about six feet, and slender, he still had good muscle tone. A nest of white hair, cropped short and never combed, climbed out from under his baseball cap, and he wore a blue work uniform although he'd been retired for years.

My husband, Craig, had given me a brief description of his ex-stepfather, Ted, but it didn't begin to prepare me for what I was about to encounter.

I knew he was a reformed alcoholic, and was profoundly affected by the refuse left over from two stormy marriages, the second one with Craig's mother. "Since then," Craig had warned, "Ted has had no use for women."

Ted had a penchant for fishing, as did Craig and I. He owned a 19-foot boat with the name *GROUCH* liberally sprawled across the stern. He had asked Craig to go fishing with him a few times, and now Craig had the idea of taking me along. He was, however, doubtful that Ted would agree, saying, "He takes his fishing very seriously."

In exchange for my passage, Craig helped get the boat seaworthy that spring, working hard to remove the dehydrated worms and fish residue cemented to the deck during the previous season.

The weather cleared and it was my day off work. It seemed like the perfect time to delve into the unknown. When we arrived at the boat launch that day, I got my first look at Ted. He was rough, all right. His vocabulary left the air almost as blue as the filterless Pall Mall cigarettes he chain-smoked, and he had no time for pleasantries.

The motor was barely started before we headed full throttle into Lake Erie to find a suitable fishing spot. When we reached three miles out and a depth of 52 feet, the engine stopped as abruptly as it had started.

Craig had advised me ahead of time to stay out of Ted's way. "One of his biggest aggravations," Craig said, "is having his line tangled by some novice fisherman swinging his pole around." I was sure Ted would put me in this category.

A nightcrawler twisted vigorously in his fingers as he shoved it onto a hook adorned only by an orange willow leaf. As he flung his line overboard, he stated flatly, "First fish gets a buck from all. Get your money ready!" Ted had shoved a cooler at me earlier and had nodded for me to sit on it between their seats, adding, "Just don't get in my way!"

Trying not to look inexperienced, I was fumbling with my worm. My anxiety had made my fingers fat and I was embarrassed at how long it took to bait my hook. Hoping gravity would be on my side, I lowered my line and hoped it would not cross Ted's when he began his monologue. "That's it, you so-and-so, take the thing! Take the whole thing! Don't play

games with me, you no good so-and-so!" He was obviously getting a bite and as his pole bounced and he drew back to set his hook, he continued cursing the fish he had not yet caught. He muttered something about still getting a bite, looked at me and then snarled, "And I'll get 'em, too, and when I do, you'd better be ready to get that net!" I sat quietly on my cooler and wondered where the net might be.

Suddenly, as if the day weren't going badly enough, I felt as though lightning had struck my rod! Not only did I have a bite, but the fish hooked himself instantly and was now running for all he was worth! I held on tight, straining to keep my rod upright as my drag moaned freely. "Ya' got somethin' on?" Ted asked with surprise. Before I could answer, he added, "Well I'll be."

A barrage of instructions followed—when to reel, when not to reel, where to aim the rod. I had tucked the pole

handle under the ribs of my 110-pound frame. My left wrist ached loudly as I fought to keep control. It was a big one, I knew, and Ted's yammering only increased my nervousness. The fibers in my wrist grew numb and I couldn't speak because of the pressure of the rod on my abdomen. The struggle continued until finally I got some relief from the brute and was able to reel in some line. My excitement began to falter, though, as it became easier and easier. The line almost limp now, I could reel with no resistance. I was sure that I had lost him.

As the feeling of disbelief slowly came over me, *wham!* There he was again! He dived straight down with the same vengeance as before, only this time his run was short-lived. He tired quickly and I drew him to the surface. Under the shallow cover of water, I could see his shining silhouette. My adrenaline flowed freely. Coming before my eyes was the largest walleye I had ever seen!

Ted was still giving instructions. "Yer gonna lose him. Take it easy. Keep yer line tight!" The only response I could muster and the first words I'd spoken since we left the dock came as a shock to all of us. "Shut up!" I snapped. "And get that net."

Ted netted my fish, helped Craig get him in the cooler and surprised me further by pulling a dollar out of his pocket. Shoving it into my hand, he grudgingly attributed my success to "beginner's luck."

The rest of the day was more relaxed and we enjoyed it, though we caught no more fish. Ted pretended to complain over and over again as he relived my fish story, but I could tell by the excitement in his voice and the grin on his face that he was proud of me.

The boat came to rest beside the dock and I was amazed at how tired I was. What amazed me more, though, was how much energy Ted seemed to have left. His freshly tanned skin against his white hair and the smile that organized the lines in his face erased the look of many hard years, and I found him almost handsome. I genuinely liked the man.

After retrieving the boat, we thanked Ted and said our good-byes. When pulling way, I saw Ted signaling for our attention. I unrolled my window and heard these words: "Hey, girl, when's yer next day off?"

ANGLER

Commission UPDATE



Governor Tom Ridge (center), with Commission Executive Director Peter A. Colangelo (left), presents Dennis Gephart, Sr., with an award of recognition from the Commission for the Windber Sportsmen's Association for maintaining the longest continuous involvement in the Commission cooperative nursery program. In 1932 the Association received some 75,000 brook trout, and the group has been actively involved in the program ever since. The Windber Sportsmen's Association is one of 156 organizations in the cooperative nursery program that rear trout fry to adult size for stocking. Gephart is currently the Association treasurer. The presentation took place in September during ceremonies at the Game Commission.



Below, touring Game Commission headquarters with Governor Ridge are Game Commissioner Vernon K. Shaffer, Game Commission Bureau of Land Management Director Greg Grabowicz (second from right), and Fish and Boat Commissioner Paul J. Mahon.



photos-PA Game Commission



Above, Governor Tom Ridge marked the 25th anniversary of National Hunting and Fishing Day on September 28 in ceremonies at Game Commission headquarters, in Harrisburg. Participants included (seated left to right) Fish and Boat Commission Executive Director Peter A. Colangelo; Representative Bruce Smith, Chairman of the House Game and Fisheries Committee; Governor Ridge; Game Commission Executive Director Donald C. Madl; (standing, left to right) Fish and Boat Commission Boating Advisory Board member Thaddeus Piotrowski; Fish and Boat Commissioner J. Wayne Yorks, Fish and Boat Commissioner Enoch S. "Inky" Moore, Jr.; and DCNR Deputy Secretary for Conservation and Engineering Services Richard G. Sprengle.

P.L.A.Y.
Pennsylvania League of Angling Youth

Coming up! Your fall issue of the P.L.A.Y. newsletter!

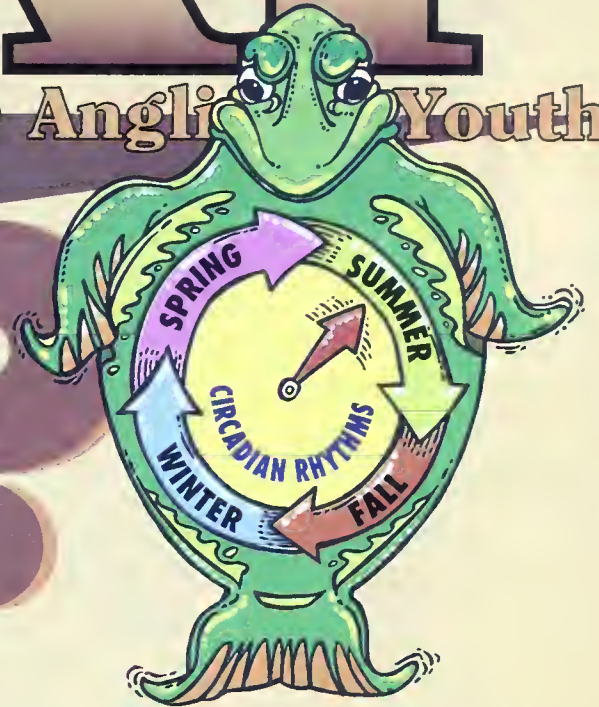


PLAY

Pennsylvania • League • of • Angling Youth

FALL 1996

How do they do that? How do fish **KNOW WHAT SEASON IT IS**



Fish change colors, migrate, build nests and spawn at the same time each year. How do they "know" when to do this? Do they have little calendars or clocks that tell them when? Nearly all animals have some kind of biological clock. It is not a real clock, but a bunch of things working together inside their bodies. This clock controls the animal's body and the things it does. Often these things, like migration, are repeated every year. Scientists call these cycles "circadian rhythms." Leaves budding in the spring and falling in autumn are good examples.

There are two signs that seem to "tell" fish and other animals when to do certain things. One is the length of the day. The other is water temperature.

Daylight

Fish and other animals have a small organ on the top of their brains. It is inside their head but can sense how much sunlight there is. In the winter the days are shorter, and longer in the summer. When bass and other

sunfish sense the days getting longer in the spring, they begin to spawn. When the days get shorter in the fall, trout spawn.

Water Temperature

Water temperature is an important factor. The temperature of water controls how a fish's body works. As the water warms in the spring, eggs begin to develop in fish that spawn then, like muskies and northern pike. Each fish has a different favorite temperature at which it spawns.

Which one is more important?

The length of the day doesn't change with the weather. Water temperatures do. So which one do you think is most important? Remember that school starts the same time each year. It doesn't matter how hot it is. You still have to go back to school. Water temperature can delay when fish do things. If the water is very cold in the spring, fish won't spawn until later. Or they might not migrate when the water is warmer in the fall. But sometime the alarm on their biological clock will go off. And remember, fish don't have snooze buttons.



Pennsylvania Fish & Boat Commission





TACKLEBOX

Do you have a question on reptiles or amphibians? Is there anything you'd like to know about fishing or boating in Pennsylvania? Do you have a question about the Pennsylvania Fish & Boat Commission? Write your question neatly and send it to: **PLAY Tacklebox**, PA Fish & Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.

DEAR PLAY:

What is the best bait for rainbow trout? I think it's earthworms. Am I right?

—From your friend,
Chris Lauve, Pittsburgh, PA.

DEAR CHRIS,

It sounds as if you've have a lot of luck catching rainbow trout with earthworms. If it works for you, then it must be the best bait! Some other PLAY members have written to tell us what their favorite baits are, too. They use corn, pieces of carrot, minnows, salmon eggs, and cheese for catching trout. Try them all and you may discover a new favorite! Good fishing!

DEAR PLAY:

How can you tell where fish are hiding in the water?

—Raymond Higgins, Harrisburg, PA.

DEAR RAYMOND,

Fish hide or rest in many places. In rivers and streams, trout and bass can be found near big rocks, and below rapids or riffles where the current starts to slow. Catfish can be found in the slow-moving pools of rivers and under dark, undercut banks. Largemouth bass in lakes often hide near sunken timber and stumps, and along steep dropoffs.

Memorize these ideas so that you remember where to cast when you go fishing!

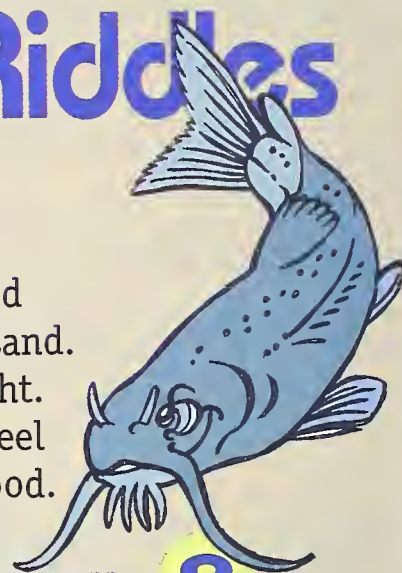


Fishy Riddles

Riddle 1

My tail is forked.
I like to find my food
among rocks and sand.
I feed mostly at night.
I have whiskers to feel
carefully for my food.

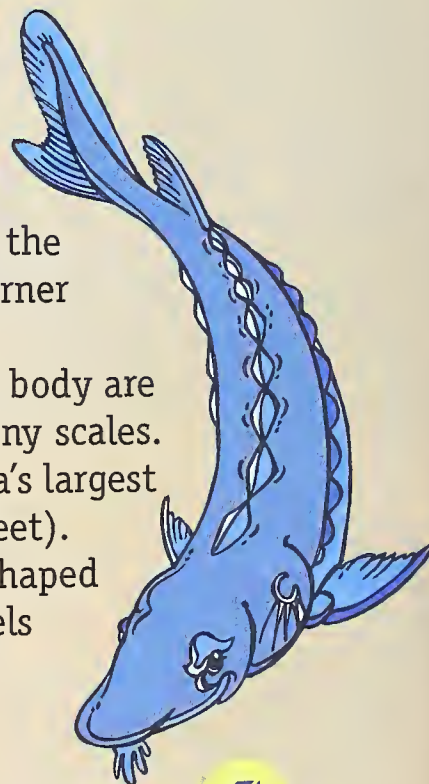
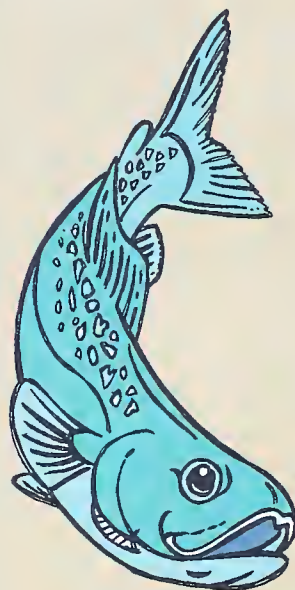
What am I?



Riddle 2

My large mouth lets me
eat many other fish.
The record for me is
over 27 pounds.
My tail is forked.
I like deep, open water.
Part of my name tells
where I live.

What am I?



Riddle 3

I can be found in the
southeastern corner
of the state.
My head, tail and body are
covered with bony scales.
I am Pennsylvania's largest
fish (up to 10 feet).
I use my shovel-shaped
snout and barbels
to feed.

What am I?

Riddle 4

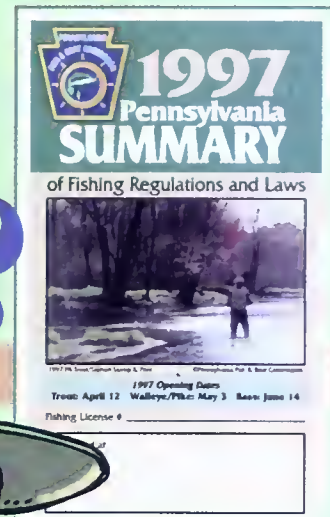
I am short and wide,
so I can turn easily.
I live in warm,
weedy waters.
I have a bright-blue
spot at the back
of my gill cover.

What am I?

1
2
3
4
5
6
7
8
9
10
11

MADE IN U.S.A.

Why Do We Have Fishing Regulations?



Sizes and Limits

All our fish are protected by regulations. How do these regulations actually protect fish? This article explains how. There are regulations that tell us how big fish need to be and how many we can keep. They are called minimum sizes and creel limits.

Minimum sizes

Nearly all gamefish have minimum size limits—you can't keep a fish unless it is a certain size. On most waters, smallmouth bass and largemouth bass can't be kept unless they are 12 inches or longer.

Why 12 inches? Bass don't spawn or reproduce until their third year or when they are about 12 inches long. This gives a whole lot of fish a chance to reproduce before they might be caught and kept. The more fish that reproduce, the more fish there will be for us to catch later. Each kind of fish grows differently. That's why we have different minimum sizes for each kind of gamefish.



**DIFFERENT MINIMUM SIZES
FOR DIFFERENT GAMEFISH**

Some waters can grow really big fish. Usually, the minimum size on these waters is bigger than other places. Biologists do that so we can catch a real trophy.



Creel limits

This is an easy one. What would happen if we kept every legal fish we caught? To make sure we have fish to catch in the future, there are creel limits. Creel limits are the number of legal-sized fish you can keep each day. There are different creel limits for each kind of fish.

Often, we can keep lots of the small, fast-growing panfish. Muskies and other fish that have fewer offspring and grow slowly have lower creel limits.

Remember that our waters are just like gardens. In each, there is only so much space to grow things in. You can have lots of tomato plants and grow lots of small tomatoes. Or you can thin out your plants and only have a few. But those few will grow bigger because they don't have to share. These regulations help to make sure there are enough fish for us to catch, and that they are the right size.

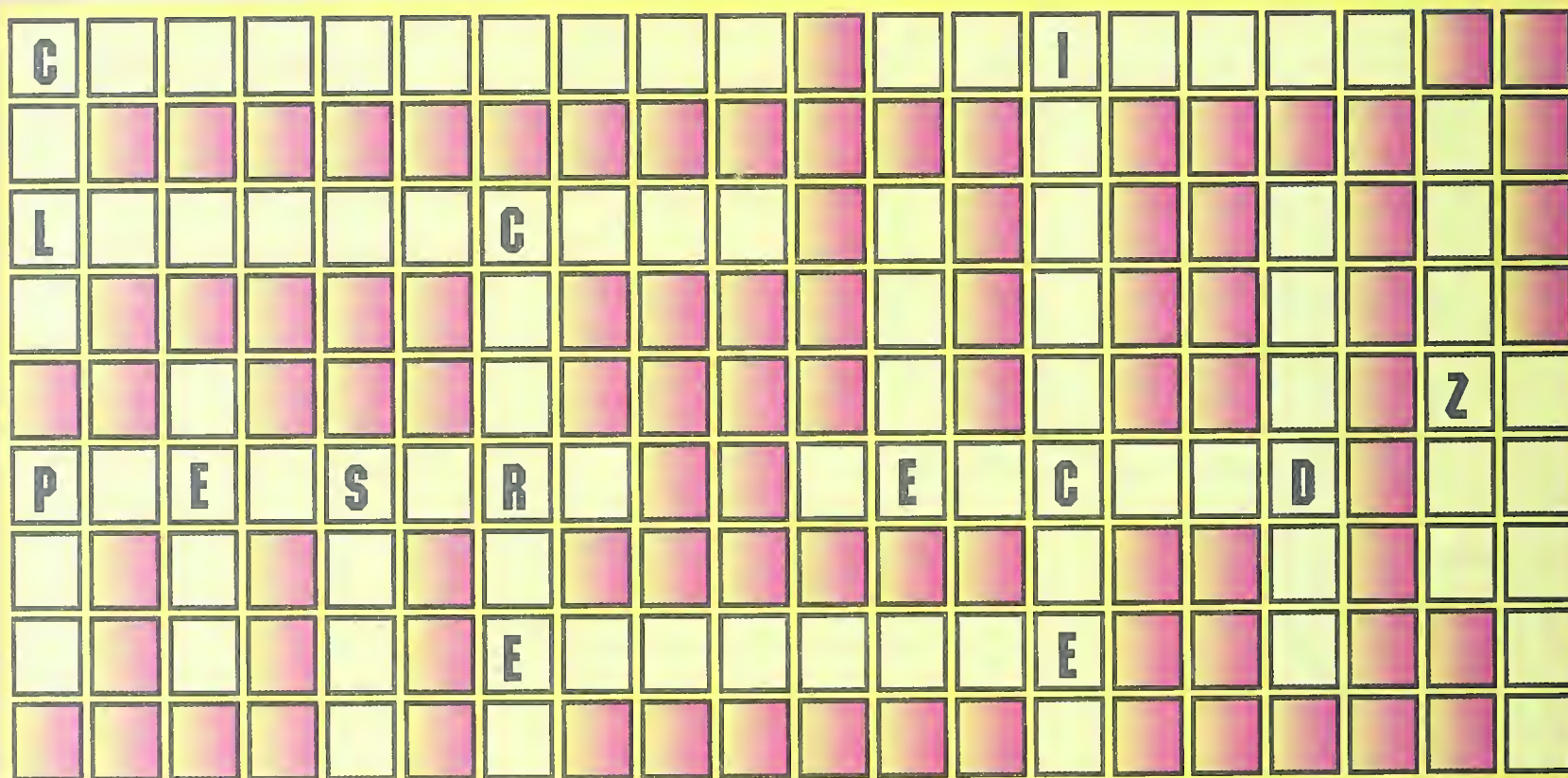
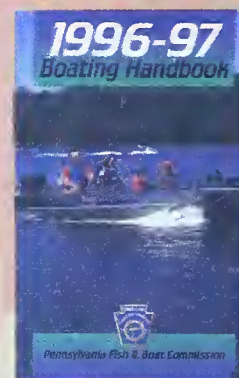
OH NO! THERE'S A FIRE!!

Would you know what to do if there was a fire on your boat? Do you have the right equipment to put out a fire? These are things you should think about before you go out on the water.

Fires are most often caused by boat motors and fuel tanks. Boat fires can happen even to the safest boaters. If a fire or explosion occurs, you must be your own "fire department." Be prepared! Not all

boats are required to carry fire extinguishers, but they are highly recommended. Check the *Boating Handbook* to be sure you carry the right equipment on your boat.

To be sure your fire extinguisher will do the job, follow these guidelines and fill in the crossword puzzle.



1. Fire extinguishers must be **Coast Guard** approved.
2. Mount the extinguisher where it can be easily **reached**, away from the fuel tank.
3. Be sure the extinguisher is fully **charged** and in good condition.
4. At the beginning of each season, check the **pressure** gauge and the hoses.
5. Make sure the **nozzle** isn't blocked.
6. Never try to use an extinguisher just to see if it **works**.
7. Have your extinguisher **inspected** at the local fire company.
8. Don't leave the extinguisher out in the summer **heat** and winter freeze.
9. Make sure **everyone** knows where the extinguisher is and how to use it.
10. Always wear your **life jacket**.
11. In case of a fire, stay **calm**.
12. Act **quickly**!
13. Pull the **pin**.
14. Aim at the **base** of the fire.
15. Squeeze the **handle**.
16. Sweep the nozzle **side** to side.

*An easy way
to remember
what to do
when there's
a fire is just
PASS.*

**P
A
S
S**

Pull pin

Aim at base of fire

Squeeze handle

Sweep side to side using short bursts, 1/2 to 1 second each



Where in Pennsylvania is Carmen Fishiego?

Oh me, oh my!! Where's Oswayo??

"Outrageous!" That's what they're calling it at the Fish and Boat Commission headquarters. It is now official—Carmen Fishiego is the only obvious suspect in the case of the missing hatchery.

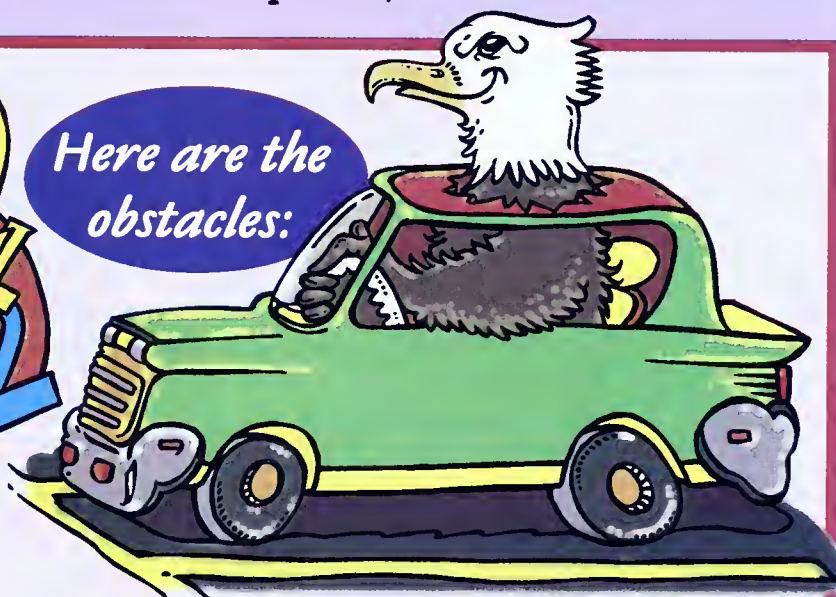
Earlier today, about one o'clock, our Chief of Law Enforcement received a call that Oswayo Hatchery in Potter County has disappeared. Oswayo is used to raise trout fingerlings for cooperative nurseries and catchable trout for anglers all over Pennsylvania. This hatchery is one of the finest in the country!

Our only concern is to find Oswayo and its occupants and put it back on the map. We've received oodles of calls with information. We've even overheard a few of Carmen's off-the-wall cronies speaking of the dastardly deed. Still, some of the information is obfuscated. We'd like to take this opportunity to ask officially for your assistance in outnumbering those obsessed oddballs and recovering Oswayo. Oh, obedient Gumshoes, find the waterway in Pennsylvania where Carmen has obscured the hatchery.

In our opinion, it's out of this world!



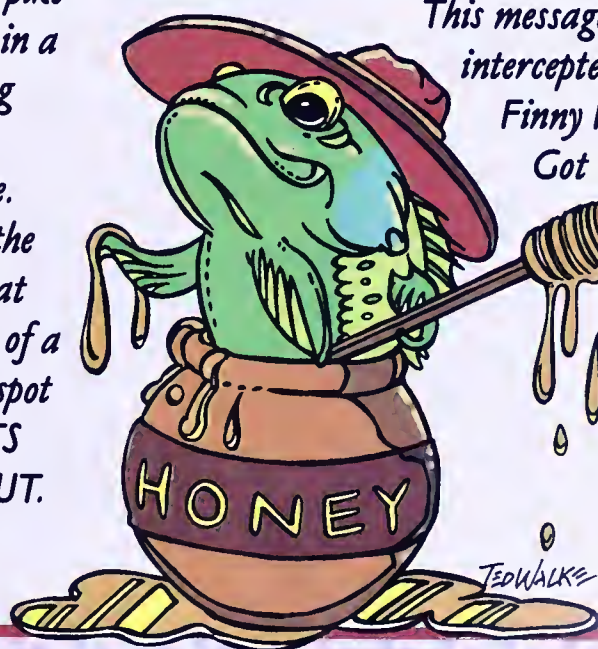
Mac the Musky was overheard repeating these code numbers: 6, 144, 322.



Another coded message reads: The OSWAYO will land where the BALD EAGLE parks.



A nasty northern pike was seen in a fly-fishing shop in Bellefonte. She told the owner that she knew of a SWEET spot with LOTS OF TROUT.



This message was intercepted from Finny Fishiego:

Got the trout on a walk-about. Sammy Sunny is sweet as honey. Did the deeds, see you at Reeds.

Ted Walker



It's a Trout's Life

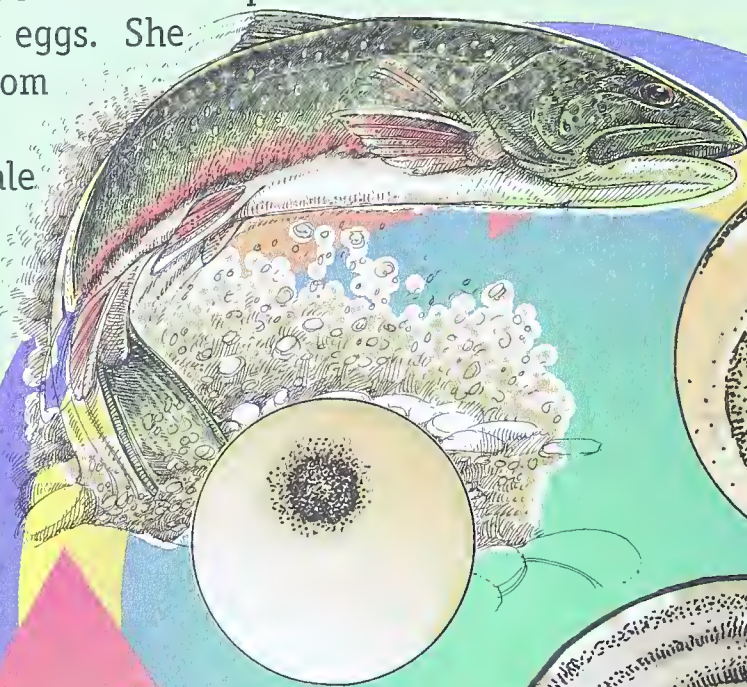
Each year before the opening day of trout season, you probably see stocking trucks loading the streams with trout. Trout stocking creates a lot of excitement in anglers in Pennsylvania. But something just as exciting that you probably

don't see is the natural reproduction of trout in streams. About the same time trout are stocked is also the time that wild trout are hatching from their eggs. Follow the seasons below to learn what wild trout are doing in the streams while we aren't watching!

Fall

The female finds a spot for the nest.

Another name for a trout nest is a "redd." Using her tail she cleans a spot in the gravel for the eggs. She can release from 500 to 1,000 eggs. The male swims above the eggs to fertilize them. Each egg is about the size of a pea. The eggs lay in the spaces between the gravel.



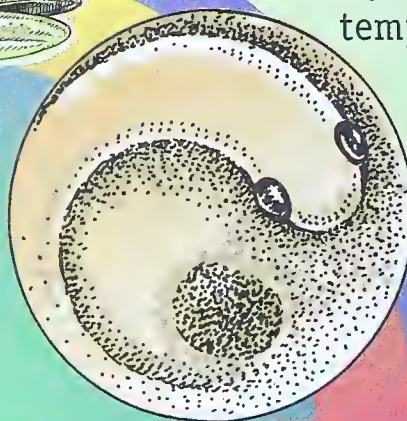
Summer



The young trout hide in shallow water under rocks. They eat small insects. By the end of the summer, young trout can be 3 or 4 inches long. Many of these young trout die before they are one year old. This is also the time when 3-year-old fish are getting ready to spawn, or reproduce, for the first time. The eggs develop in the female and grow larger each day.

Winter

The eggs keep developing. They get oxygen from the water that flows around them. The eggs have a yolk, just like chicken eggs. The tiny fish in each egg gets food from this yolk. The water temperature must stay between 35 degrees and 55 degrees for the eggs to hatch.



Spring

The trout eggs hatch from February to March. After the fish hatch, they are called "fry." They still get their food from the yolk that is attached to their bodies. This is called a "yolk sac." The fry live in the bottom gravel. When the yolk sac is used up, the fry swim up from the gravel. Then the fry eat very small animals in the stream. The fry are about 1 1/2 inches long now.



A Kid's Fish Scale Sketch

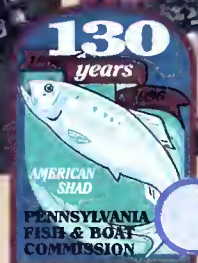
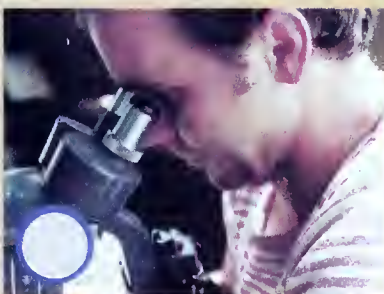
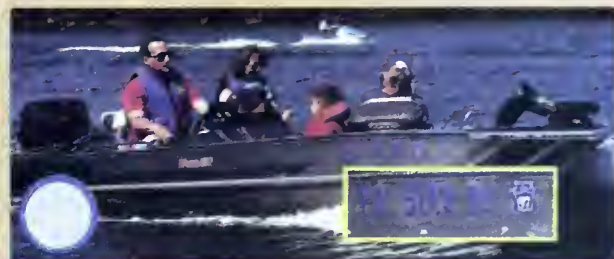


We're sure you know what the Pennsylvania Fish and Boat Commission is, but do you know about all of the things that the Commission does? Here are some pictures that show different things that the Fish and Boat Commission does.

Match the statements below with the correct picture. Mark with a star the things that you already knew the Commission does.

Did you know that the Pennsylvania Fish and Boat Commission...

- ☐ **A.** Operates a fleet of 45 trucks for stocking fish?
- ☐ **B.** Has 82 Waterways Conservation Officers (WCOs) to patrol the waters?
- ☐ **C.** Investigates water pollution?
- ☐ **D.** Registers over 330,000 boats?
- ☐ **E.** Has a group of volunteers to teach fishing and other classes?
- ☐ **F.** Does stream surveys to collect information on coldwater and warmwater fish?
- ☐ **G.** Stocks over 5 million trout each year?
- ☐ **H.** Is 130 years old?
- ☐ **I.** Has 14 fish culture stations, or hatcheries, across the state?
- ☐ **J.** Uses a fleet of patrol cars and patrol boats for safety, law enforcement and research?
- ☐ **K.** Publishes *Pennsylvania Angler*, many books, pamphlets and brochures?
- ☐ **L.** Gives certificates to over 14,000 people each year who take the basic boating course?
- ☐ **M.** Issues over 1 million fishing licenses each year?
- ☐ **N.** Operates a large research vessel on Lake Erie?

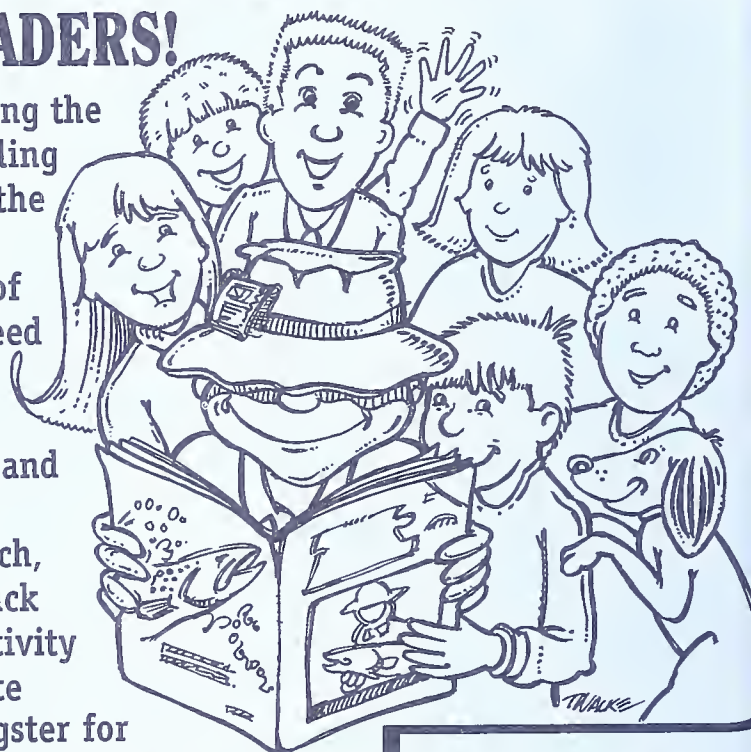




Pennsylvania League of Angling Youth
Pennsylvania Fish & Boat Commission
P.O. Box 67000
Harrisburg, PA 17106-7000

HEY, ANGLER READERS!

You can look forward to seeing the Pennsylvania League of Angling Youth (PLAY) newsletter in the *Angler* four times each year. But to get the full benefits of membership in PLAY, you need to complete the coupon below. Full membership in PLAY is only \$3.00 per year and members receive the PLAY Newsletter, a collectable patch, tacklebox stickers, a good luck fishing hook and several activity pages. Sign up your favorite



youngster for
PLAY or be prepared to share
your copy of the *Angler*!



LIFE JACKETS
They Float
YOU DON'T!

SLIMY-SCALY JOKE

Question:

What do frogs use with
their computers instead
of mouse pads?

Answer:

Lily pads
Thanks to
Kayla Smith
from Seven Valleys!



FISHING TIP

November is still a good time to fish for largemouth bass with nightcrawlers. Run the hook through the worm twice. Leave lots of room on both ends so the worm can wiggle! Attach a sinker about 12 inches above the hook. **And go fish!**

SUBSCRIBE TO

PLAY

Pennsylvania • League • of • Angling • Youth

The Pennsylvania League of Angling Youth is an educational program designed to reach youngsters. Members receive a colorful sew-on patch, quarterly newsletter, publications, access to the PLAY Correspondence Center and more. **It's a bargain at only \$3.00 a year. Sign up today!**

Name _____ Age _____

Address _____

City _____ State _____ Zip _____

Make checks payable to: Pennsylvania Fish & Boat Commission, Mail to: Pennsylvania Fish & Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000.

Walleyes Lake Arthur

by Darl Black



The hottest walleye fishing in Lake Arthur occurs in the fall.

Initially, when the water begins to cool, anglers may capitalize on an aggressive shallow water bite as walleyes move to the shoreline. But as the water temperature drops further, the fish move to deep water, following the bait.

After the temperature turnover is complete, the feeding depth for walleyes becomes 22 to 33 feet deep. The fish relate to the main channel's points and bends.

The weatherman was wrong again. The forecast had been for temperatures in the high 40s with sunny skies—which would have been outstanding for the first week of December. But the day turned out to be in the 30s with clouds and a cold, misty rain.

The plan had called for largemouth bass fishing on Lake Arthur, the top-ranked bass lake in the state according to the Commission's Angler Awards Program. But with cold water and a heavy overcast, the bass were uncooperative.

"Who in his right mind goes fishing in December?" mumbled Lee Duer, my boat partner on this outing. "I could have been hunting. This is the first time I've given up a day of deer hunting to go fishing, and look at the fine mess you got me into!"

Even Woody Knis, the local expert and our host for the day, had managed to connect with only one largemouth—a plump 4-pounder taken off a beaver lodge near a secondary creek channel. About noon, Knis and his partner pulled their boat alongside ours and suggested a change in the game plan.

"Let's go walleye fishing!" he proposed. "I know a spot..."

"What? Another wild goose chase?" interrupted Duer with a put-on sarcastic tone. Then Duer broke into a smile and said, "Only kidding! Only kidding!"

"I can't do a thing about the weather," Knis responded calmly. "If we had received the warming trend, the bass may have been active. But we have to take what Mother Nature gives us. And she gave us walleye weather today."

"Are they going to hit a jig-and-pig or spinnerbait, because that's all I have with me?" Duer asked.

"Blades and spoons will probably be the ticket," Knis said. "Unfortunately, I only have a couple of those baits with me."

"Got it covered," I interjected, reaching under my front deck and pulling out a utility case of several dozen hard-metal

Lake Arthur Walleyes

lures. "I never leave home without them."

We followed Woody down the lake. As we rounded the large island just above the dam, we discovered several boats drifting near the channel. Watching the occupants' fishing rods go up and down like the arm on an old water pump, it was apparent they were vertical jigging.

As we began working the blade baits, I kept my boat positioned between 18 and 25 feet of water near the tip of a point. Ten minutes passed without a bite, although I saw Knis land at least two walleyes.

Knis motored slowly over to us. "Move deeper to the river channel, at about 30 feet. And try a gold-finish blade."

The advice was right on target. After switching colors, Duer immediately connected with a plump 18-inch walleye. Two minutes later, I netted a second walleye of similar size for him. Then a short fish. On his fourth 'eye, about 22 inches long, Duer proclaimed, "Isn't December fishing just fantastic!"

Arthur's walleyes— past, present and future

Woody Knis started fishing Lake Arthur for walleyes in the late 1970s at about age 14. "It was really difficult to catch a walleye back then," he says. "I could fish all day and maybe land only one walleye."

John Galida, former owner of the largest tackle shop in the Lake Arthur area, echoes a similar scenario. "In the 1970s, newly

impounded Lake Arthur was beginning to establish itself as a bass lake, not a walleye lake. The Fish Commission had stocked walleyes, but no one was catching them. Many anglers felt there were no walleyes in the lake. My fishing buddy and I worked at figuring out the walleyes, and we started making some pretty good catches.

"Anglers coming into my shop did not believe the pictures of walleyes on the board were coming from Arthur," Galida says. "Even the local Waterways Conservation Officer said he thought we were bringing in walleyes from Pymatuning.

"Back then the local anglers were attuned to fishing walleyes either in the Allegheny River or in Pymatuning," Galida says. "But Lake Arthur walleyes behaved differently because of unique baitfish as well as the different structures in a reservoir."

Galida followed the advice of the Missouri state slogan—"show me." He took skeptics out and showed them how to catch walleyes from Lake Arthur.

The average size of the walleyes in the early 1980s was impressive because alewife provided an exceptional forage base. The walleyes fed well, and for the most part were undisturbed by anglers who were unfamiliar with fishing for walleyes, which

set their feeding clocks by alewife movements around the reservoir.

Knis was one angler willing to learn new techniques. "After a couple of years on the water, I discovered the depth and type of structures that the walleyes were using," he admits. "Then I started catching a lot of big walleyes."

"Although I released most of the walleyes I caught during the hey days on the reservoir, it was possible to catch a limit of walleyes in the five- to six-pound range," Knis says. "One day I went out and caught a 9-pound, 14-ounce walleye. Figuring I may never get one bigger, I took it to the taxidermist. The next day I caught a 10-pound, 2-ounce fish. Now I have two mounted walleyes."

Knis used to troll Hot-N-Tots to make many of those catches. He had discovered the magic depth for feeding walleyes during the summer on Lake Arthur was 14 to 17 feet. By long-lining a well-tuned 1/4-ounce Hot-N-Tot, he could hit the tops of humps and roadbeds at the magic depth.

However, the hot catches of big walleyes did not last. Knis and others point to the introduction of hybrid stripers in the 1980s as a turning point. "At first I noticed many spots where we used to catch walleyes were taken over by stripers. There appeared to be an inverse relationship—the bigger the stripers got, the smaller the walleyes became. Nowadays, you catch a lot of 16- to 20-inch walleyes, but I rarely



map graphics-Ted Walke

see a truly big fish. It seems to me the stripers have reduced the amount of forage for walleyes."

Galida does not accept that theory. Instead, he points to exploitation of the fishery concerning the decline in the overall size of the walleyes.

"Back when we were catching numbers of big walleyes, the Lake Arthur population basically had not been exploited—few anglers were successful. But as more and more anglers became proficient at catching the walleyes, the big fish were removed and the advancing year classes have not been afforded the opportunity to grow as large. Unlike bass fishermen who return their catches to the lake, walleye fishermen tend to harvest almost every fish they catch."

Commission Area Fisheries Manager Craig Billingsley admits that the present walleye fishery at Arthur is down somewhat from peak years. However, he, too, doubts that it is caused by stripers eating a greater share of the forage.

According to Billingsley, there is still plenty of forage in the lake—perhaps too much. Recently gizzard shad have started turning up in Lake Arthur survey nets—a fact that does not please the Fish & Boat Commission biologist.

"We did not need the gizzard shad," says Billingsley, who believes this forage fish may have been introduced illegally by some area anglers who thought they were helping the fishery. "This complicates, and actually hampers, the management picture."

The factor that Billingsley has been looking at is year-class survival. Arthur has been stocked annually with walleye fry, which are hatched from eggs gathered at Pymatuning Reservoir.

However, a recent study by a Penn State researcher is shedding some light on a potential problem that may be affecting fry stockings across the state. The study has been looking at early spring plankton blooms in Pennsylvania lakes. Fry feed on plankton, and if the food for the newly hatched fish is not present, year class production suffers or may fail completely.

"This study shows that shallow Pymatuning in the western-most part of the state has early spring blooms of plankton," says Billingsley. "The walleyes in Pymatuning spawn earlier than any other lake in Pennsylvania. This works fine at Pymatuning because there is generally food available for them. However, Lake Arthur just does not have the necessary plank-

ton blooms at the time we stock these little fry from Pymatuning."

That means survival is far below expected norms, and may result in loss of an entire year-class of stocked fish if the water is void of the necessary plankton.

"At Lake Arthur we are now going with fingerling stocking," says Billingsley. "By holding the fry to a fingerling stage at the Pymatuning hatchery, Lake Arthur has time to warm and for plankton blooms to occur. I expect that the walleye fishery at Arthur will gradually improve."

However, fingerling stockings are very expensive because the fish must be held longer than fry. Fingerling stocking statewide would be too expensive.

"I think what you are going to see in the future is an 'advanced fry' stocking," Billingsley says. "We will hold walleye fry somewhat longer to give the lake a chance to warm up. This will be more economical than retaining the fish until a full fingerling stage."

Best bet at Arthur

With the changes in the Lake Arthur fishery over the years, the hottest walleye fishing now occurs in the fall.

"The summer fishing was, and still is, pretty much a trolling game for most lake anglers," says Knis. "Hit humps and roadbeds that crest about 14 or 15 feet with adjacent deeper water, and you will take some walleyes. When not feeding, the walleyes suspend off the structure over the deeper water. There are some walleyes in the weedbeds, too. But in the fall, walleye location and presentation change drastically."

Initially, when the water begins to cool, anglers may capitalize on an aggressive shallow water bite as walleyes move to the shoreline. But as water temperature drops further, the fish move to deep water, following the bait. When the fish are concentrated on key deepwater structure, Knis enjoys his favorite walleye fishing.

"After the turnover is complete, the feeding depth for Lake Arthur walleyes becomes 22 to 33 feet," says Knis. "The main creek channel is the key structure. The fish relate to channel points and channel bends. Channel points are those points that extend from shore and drop directly into the channel. Sometimes the walleyes are right in the channel, especially if brush or wood has settled on the bottom in the middle. The prime area of the lake is from Barber Point to the dam."

There are three successful baits for

walleyes during November and December. Perhaps the most used lure is a leadhead jig with soft-plastic body and tipped with a fathead minnow. It is something that is relatively easy to fish, yet takes a lot of fish.

Knis prefers a 1/4-ounce leadhead with a short piece of scented plastic worm covering the shank, but with the curl-tail broken off. In place of the tail, he adds a 2-inch to 3-inch fathead minnow hooked through the jaw.

However, Knis does not believe the jig-and-minnow combo triggers walleyes into striking as well as a blade bait or a jigging spoon.

"Flashy metal can produce strikes when the walleyes turn away from a slow-moving jig," says Knis. "Since you are dealing with depths over 20 feet, a vertical presentation is the best way to approach these deep fish."

Knis prefers a 1/4-ounce blade bait. Blades are available in a range of colors, but he wants one with some flash. Often he takes a plain silver or gold generic blade and adds a strip of chartreuse or green prism tape. He insists that a little bit of flashy color can make all the difference.

"The real secret is how you work the blade," Knis says. "Use your rod tip to lift the bait from the bottom, but just enough to feel the blade vibrate. Then slowly lower the rod tip to let the bait fall back to the bottom. There should be no hard snap or rip. Simply lift, drop, lift, drop, lift, drop. As soon as you detect the vibration, drop the rod tip. You never move the blade more than 8 or 10 inches off the bottom. When you feel resistance or weight on the line, set the hook."

To fish a blade, Knis uses a 6-foot medium-power casting outfit with 12-pound monofilament. He does not like the new braided lines for this type of fishing. Other anglers prefer a medium/heavy spinning rod to work the lighter blades.

Will the big walleyes return to Lake Arthur? That is a question no one can answer for sure. But if fishing pressure was responsible for the decline of big fish, then the answer is probably no—unless anglers develop a catch-and-release ethic for walleyes. Today more anglers are catching walleyes at Arthur than 15 years ago, but the average fish is only 16 to 20 inches.

"That's not all bad," says Knis. "The smaller fish are much better eating!" So much for putting them back to grow into trophies!



Cast and Caught



Scott Carver, Flourtown, caught this 4-pound, 10-ounce palomino trout in Wissalickon Creek last April. The fish was 22 inches long.



This smallmouth bass was caught and released by Earl Grimes, of Jefferson. Earl was on a fishing trip to Presque Isle Bay last spring when he reeled in the 18-inch fish.



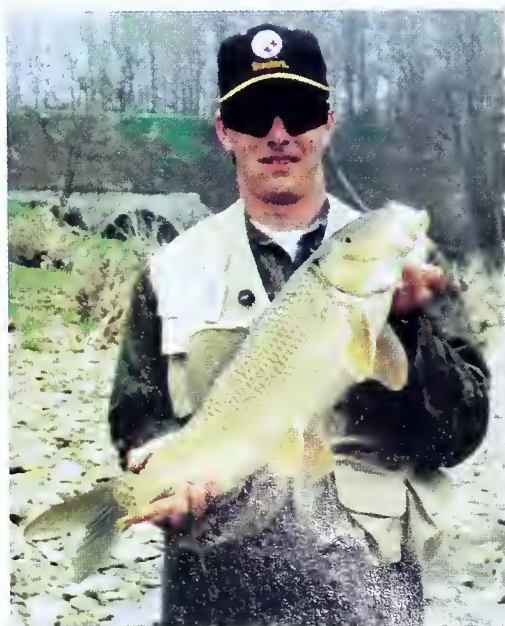
Barb Hoffman caught and released this brook trout while fly fishing on Mahoning Creek. The fish was 20 inches long. Nice job, Barb!



Bruce Strunk, Stroudsburg, used a minnow to convince this striped bass to strike. The fish, caught in Lake Wallenpaupack, weighed 19 pounds and was 33 1/4 inches in length.



Karla Hinis, Somerset, shows off the 24-inch walleye she caught in Lake Somerset. The fish weighed about 7 pounds. Way ta' go, Karla!



Scott Schrader, Utica, PA, caught and released this 10.1-pound sucker in Elk Creek, while fishing for steelhead. The sucker grabbed an egg fly Schrader was using with a fly rod.



Erie resident Art Morris hooked this 21.2-pound lake trout while fishing on Lake Erie. The 32-inch fish hit his lure in 90 feet of water.



This 28 1/4-inch walleye grabbed Randy Sliker's lure while he was fishing Lake Erie last May. The Girard angler's fish weighed 8 pounds, 5 ounces.



Pennsylvania Fish & Boat Commission

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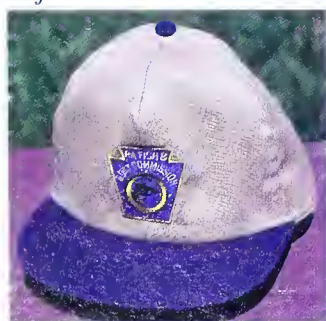
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On the Water

with Robert L. Petri

Revisiting Our Angling Roots

Down over the hill behind the house I grew up in, a hand-laid wall of rock used to hem in the insistent flow of the outlet of a little lake. The lake borders the home town of my boyhood. The wall was high and strong, and was almost constantly being maintained by an elderly gentleman who was in some ways as stubborn as the rocks themselves. The water could not budge the wall, though it had been trying for decades. When I was a boy, I used to sit on the wall and fish for bullheads, suckers, perch and anything else that might be there. These were not the glamour fish of magazine covers, big trout and bass that split the water in powerful leaps. But they were the fish I cut my angling teeth on, and they were just down over the hill. I spent a lot of time there.

These days, things are different. I spend a lot of time, and no small amount of money chasing the more glamorous fish. I tie the latest flies, buy the latest hot lures and I read what the experts have to say about the latest methods. I take it all very seriously. Like so many of you, I feel as if I have grown as an angler over the decades. With each passing season, I grow smarter and more accomplished as a fisherman.

But all things that grow must have roots. And mine are back there on that wall, in a simpler time, with simpler fish. And sometimes, it calls me back.

We do not suddenly pop onto the scene as successful anglers just by announcing to the world that it is so. It takes a lifetime of learning, a process that never really ends. And I believe that if you scratch any good fisherman, you will find a layer very close to the surface where there was a simpler beginning. A learning place with learning to fish.

If you think about it for a moment, the lessons learned over the perch and bullheads of our earlier days were only rehearsals for what we do now as anglers in search of the so-called more "sporting" species. We had to learn where the fish lived. Was it better over by the sunken log or in the deeper part of the pool? Why? We had to become aware of what the fish preferred. Why was a big, juicy redworm the right bait for suckers, but the perch liked a fresh, wriggling minnow? While it is true that learning was easier over these fish than the more demanding trout and bass we pursue today, the basic lessons remain the same.

Yesterday's experiences helped us to become better fishermen today.

But there's more. I have a number of friends who decided to take the plunge into angling, and began by totally outfitting themselves to fly fish for trout. They became lost and discouraged in the crossfire of intricacies that comes when you are trying to match the hatch and keep that long fish pole out of the trees at the same time. Only one or two still have any interest in fishing. Perhaps they tried to skip a couple of steps in the process, and missed their beginnings. It can make a difference.

Every success on the water is another strand in the cable that links us to this wonderful sport and makes us love it all the more.



I began fly fishing when I was 11 years old. I was 19 before I caught my first trout on a fly. But boy, did I have a raft of fly-caught bluegills under my belt by that time. They prepared me for the new challenges that the trout would offer—how to detect the take, how to lay the fly out just so, how to control the line, and on and on. I was hooked on fishing long before I ever became hooked on trout. My time spent learning over the more forgiving fish of my boyhood ensured that.

A few years ago, I was sitting in the parking area of the Fish & Boat Commission access at one of the more popular lakes in Crawford County. It was another day out on the road for me, fishing here and there, and I'm not sure what took me there, except maybe it was a good place to have a sandwich and look at my maps.

An elderly gentleman and a boy of about 10 or so were pulling an old beat-up flat-bottom cartopper out of the lake after a morning on the water. Hot on their heels and waiting their turn were two anglers in a sleek, fully loaded bass boat. It bristled with equipment. These guys were obviously serious, returning from some serious fishing. They looked kind of impatient.

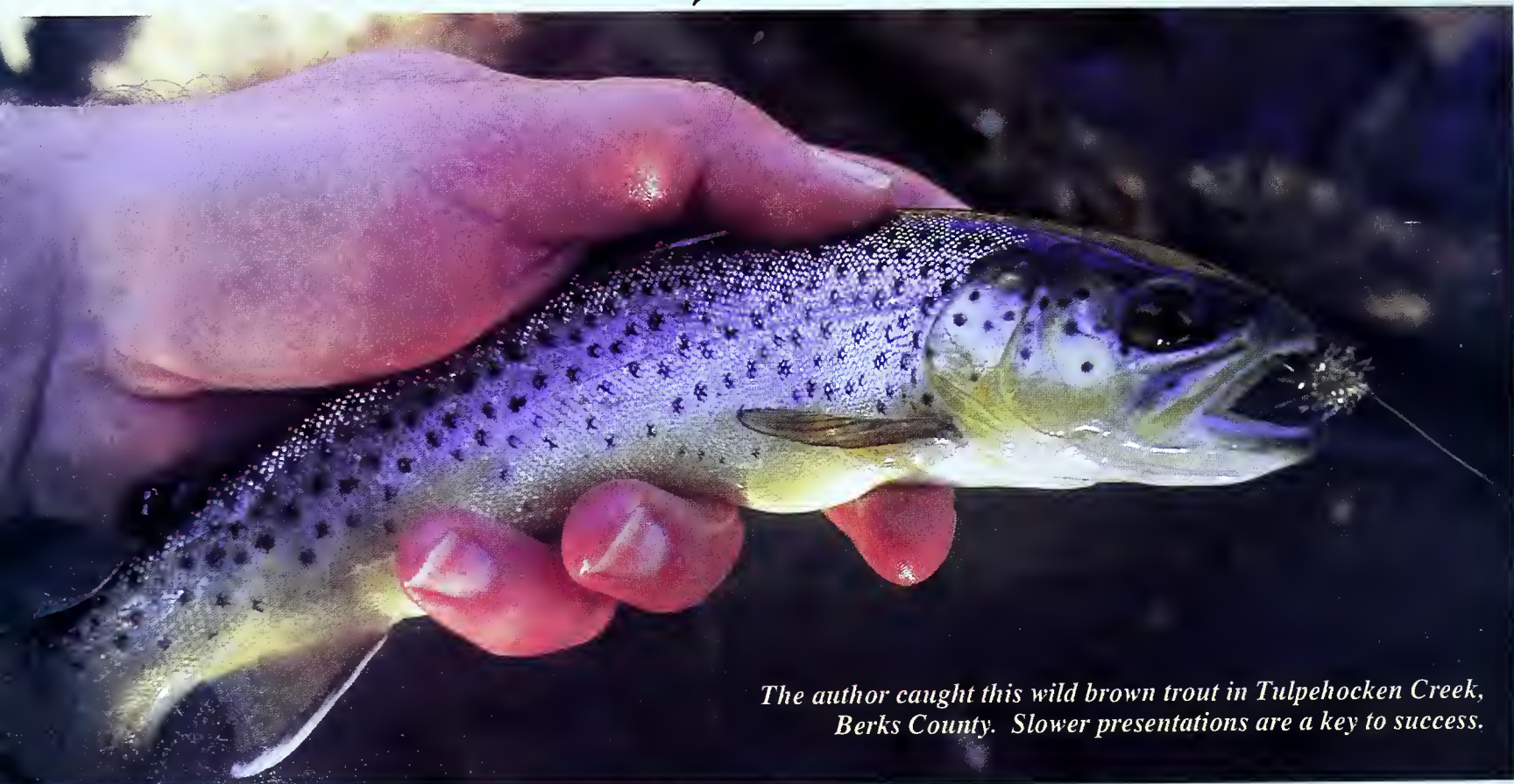
The man and the boy finally got the old boat loaded in the back of a pickup truck, and the guys in the bass boat came zooming into the ramp. As they were unloading and making ready to trailer the boat, the boy wandered over to them. He was carrying a nearly full stringer of moderate-size bluegills, along with a few decent perch. From where I was sitting, it was pretty obvious that the boy wanted the men to see how well he and the older gentleman had fared that morning. He was proud of his catch. It was equally obvious that the men were not interested. They were beyond all that, and they dismissed the boy with a wave.

I could not hear the conversation, but I hope that in the rush to be more sophisticated anglers they had not forgotten their beginnings. The road that began long ago and eventually led to the bass boat and all that top-end gear likely began with a stringer of bluegills much like the one the boy held. It would be a shame for any of us to lose sight of that. It would be like forgetting where we came from.

ANGLER

Buck Season TROUT

by Vic Attardo



The author caught this wild brown trout in Tulpehocken Creek, Berks County. Slower presentations are a key to success.

My first hard thought when I looked up into the sky and saw a lone red-tailed hawk circling overhead was, "Well buddy, it's just you and me on this river."

The hawk, climbing on the updrafts of the surrounding ridges, peered down from its elevated vantage looking for something that would make a hearty meal. Standing knee-deep in the rushing current, I was a lot closer to the scene, but I felt that both of us were inspecting the same thing—a long ribbon of water in an otherwise vacant valley.

Of course, the hawk and I had different purposes. Driven by hunger, it wanted something to pester and to eat; I, on the other hand, had already eaten my peanut butter and jelly sandwich and wanted nothing pestering me at all. The hawk continued to circle and eventually moved on. I stayed where I was and resumed casting.

For the entire afternoon I got the peace and quiet I needed, plus a few trout as well. The only disturbance came when three rounds of distant rifle fire echoed through the valley. I expected and welcomed this. After all, it was buck season and the sound of booming guns meant that sportsmen were occupied elsewhere.

Now, I have to say, I like fishing with friends and good fishermen. I would not trade the memories of these outings for anything. But there are times when, like everyone else, I enjoy working uncontested waters. So for years now I have looked forward to those two weeks of antlered deer season when I find many of my favorite streams and rivers vacant of rivals, if not rifles.

During this brief season, the rush to pot a buck leaves most trout streams open and clear. Even though I occasionally ponder the consequences of an errant bullet, the uninhabited waters keep me coming back for more. In my fishing logs I call this

*Target the transition zone between riffles and pools.
The center gut of these areas is a key location for fall trout.*



period, "Buck Season Trout," and I await this time on the water as much as hunters anticipate their trips to deer camp.

When to go

The two-week buck season runs between the last week of November and the first week of December. Unlike the various weather patterns that greet sportsmen during this time, the calendar period is a constant. Yet, while the weather may change, I have found the fishing tactics to be relatively consistent.

During buck season, the trout can face a wide range of conditions. The forecast may furnish everything from snow flurries to the re-greening of streamside grass after a couple of warm days. If I can pick my fishing by the weather, and not just by available time, I'd choose a bright, sunny day with as little wind as possible, the latter for my comfort as much as any fishing consideration. I also prefer a day that promises to be on the stable side. An afternoon that becomes heavily overcast with a stiff approaching cold front tends to be of little value.

Water temperatures during buck season have fallen from their summer highs but are still way above their winter levels. Throughout the eastern part of the state, I've encountered stream temperatures between 38 and 45 degrees, with the low 40s the norm. For the trout angler, this translates into a dearth of hatches. I've met some blue-winged olives and assorted caddises as late as the middle of November, but I have not observed anything other than midges during buck season. Because of this, 90 percent of my buck season fishing is done with nymphs and streamers, and an important 10 percent is done with those accursed infinitesimal midge patterns.

HOT TIP #1: The weather pattern and angling techniques for buck season trout can start way back in the middle of September and run clear into early December, when winter's icy grip further reduces water temperature and calls for even slower presentations.

This is also a low-water period on most streams. Hopefully, some fall rains have spruced up the currents from their sickly summer flows, but in most years, buck season streams don't experience many floods. The exception is a two- to three-inch rainfall from a late tropical storm or an early blizzard that adds frigid water to the mix. But in the norm, I often find the creeks flowing as clear as glass. In these low-water situations the big, black-and-olive Woolly Buggers that work so well in other cold-weather seasons when the water is high or muddy, don't work now.

Selecting the right time of day is also a crucial factor in buck season trout. This is the period when anglers can practice bankers' hours. In late November I'm frequently off the water by 4 p.m., having enjoyed some pre-noon nymphing followed by some early afternoon midging. I've found that a slight warming of the water, or more probably the sun's radiant energy in non-shade locations, turns on the trout through midday. Consequently, a cooling of the trout's environs as the orb recedes below the hills turns them off. It's a routine and tempo I've come to expect during this time of the year.

There is one other event that also adds to the enjoyment of wearing neoprene waders while most sportsmen have donned bright orange. When fishing in October and early November, I'm often plagued by a non-magical carpet of leaves. Falling from the streamside trees, these colorful sheets of plant tissue impede the progress of my line, or get caught on the hook when I'm starting a backcast. By the time buck season rolls around, though, the fall passage is generally over. Packets of leaves may still be clinging to some rocks, and the shallow eddies and banks are full of their fading colors. But when the first shots are fired, the stream's main flow is wonderfully devoid of the fallen troublemakers.

I think a lot of anglers stop fishing in autumn because they've had it with the bundles of foliage catching their lines and ruining their drifts. But as they say, this too shall pass, and in buck season most of the leaves are gone and the waters are un-

clogged. It's also a lot easier to cast when tree branches are bare and there's no fly paper to grab errant offerings. If a few stalks are still holding on with their last ounce of strength, an easy tug relieves them of their burden.

Buck Season TROUT

For these reasons, I concentrate my buck season fishing on medium-size streams where I am confident I can work subsurface patterns without the fish seeing my every move.

Where to go

I have a seasonal system in trout fishing and I pick streams to fish based on water conditions. For example, I find I do best on very small streams, those under 25 feet wide, when I can work upstream with dry fly patterns. Those same small streams fished down and across in low water, when every trout in the creek can see you coming, are not as productive.

Large streams or rivers, that is, anything over 100 feet wide, are troublesome to work in low water because the fish have retreated to the deeper channels. Often this situation presents some difficult wading situations in large rock substrate, which I just as soon avoid.

During buck season, many medium-size streams, 35 to 100 feet wide, have risen from their summer lows but are not flooded. The trout have spread out across the waterscape and can be hiding just about anywhere. In addition, I can fish these streams with a basic down-and-across method—a good cold water technique—and still stay reasonably out of sight without painting my face in camouflage.

HOT TIP #2: Spring-fed streams also make great buck season waters because their temperatures are more consistent. But don't make a mistake in believing that the temperature of a spring-fed stream is constant. These waters are affected by cold weather as well.

Last year, buck season found me on one such stream in central Pennsylvania, Spring Creek above Bellefonte. Driving along the winding road that borders Spring Creek I selected a portion of the stream with three short riffles followed by three thigh-high pools, the last one ending in a wide tailout that culminated under a new cement bridge. I liked the way some of the larger trees were hanging over the east side of the bank and the way the water curled along some bankside eddies. In addition to the big bare sycamores, much of the stream was bordered by a flat pasture that offered the creek little shade or cover. In summer, I would have avoided this portion of Spring Creek during midday fishing, figuring the trout would not find much comfort in these open waters. But for buck season it was exactly what I wanted.



(inset group of flies) Top to bottom, left to right:
- Damselfly Nymph
- Pennsylvania Sculpin
- Pot a' Peacock (middle)
- Gold and Silver Heavy
- Metal minnows.

The natural minnows of the stream are also affected by the cold water. Work your streamers with a long downstream glide and retrieve in short, sporadic strips.

Seasonal considerations in stream location are one of the last things trout anglers talk about, but I consider them very important to successful fishing.

When I got into position above the first riffle I took the water temperature. My thermometer gave me a reading of 42 degrees. The sun was nearing its apex and the riffles sparkled in the bright light. The banks of the stream were covered with an inch or two of snow, but it wasn't melting and the stream was running clear. At least it wasn't that color I call "digital-display green," a hue that usually means melting snow, very cold water and poor fishing.

HOT TIP #3: Target the transition zone between riffles and pools. The center gut of these areas is a key location for buck season trout.

Commission biologist Mike Hendricks had told me he had been doing well during the middle of the day using a Dave's Damsel Fly. Over the years I've learned to take the advice of Commission personnel and because Mike regularly fishes Spring Creek, I started with my own damsel nymph creation made with olive sparkle yarn and a Swiss Straw shell.

I cast through the fast water without a strike, but in the brief margin between the riffle and the head of the pool the first brown struck. It was a small fish and I quickly sent it home. I worked the remainder of the upper pool without moving my feet and had another hit, which I carelessly missed.

It seemed the trout were interested in the damsel fly pattern but in the back of my mind something was gnawing at me to make a change. The olive damsel looked good against Spring Creek's deep-green vegetation, but I kept staring at those glistening waters, thinking that a brighter fly might do the trick. I tied on a silver chenille minnow with a light-gray tail and a few strands of pearl Krystal flash and again worked the upper part of the pool. The trout that I missed the first time struck again in the same spot, and so did another about three feet closer to the sunny bank.

I stayed with this size 12 fly through the entire section of Spring Creek and caught about eight fish, including one 16-inch brown. About 1:30 p.m. I saw a cloud of midges dancing above a small eddy and noticed one fish rising beneath them. Instead of getting out the magnifying glass and tying on a midge pattern, I decided to appeal to the trout's territorial instincts and annoy it with my minnow pattern. It took on the first drift.

Though the water was cold, I had found on this excursion that a number of trout were still eager to take my minnow fly stripped with short pulls along the bottom. A slow dead-drift nymph may have attracted the same fish and maybe more, but I was content with this style of fishing because the regular casting and mending kept me warm in the cold air. All in all, I considered this Spring Creek experience some pretty typical, and pretty wonderful, buck season trout.

HOT TIP #4: Instead of trying to put out a fire with a fast-moving fly, retrieve a streamer with a long downstream glide and sporadic short strips as the fly curves into the current. Remember that the natural minnows are also cold.

Use the clues

For a couple of years now I have been performing an experiment on some of my favorite trout waters. Using a four-foot mesh net, I plant two standup poles in the stream bed and watch to

Lucky Seven Buck Season Waters

- 1) Lackawanna River, Lackawanna County.
- 2) Tulpehocken Creek, Berks County.
- 3) Spring Creek, Centre County.
- 4) Pohopoco Creek, Monroe County.
- 5) Bushkill Creek, Northampton County.
- 6) Kettle Creek, Potter County.
- 7) Big Fishing Creek, Clinton County.

see what floats into the trap. I don't pick up rocks to release aquatic creatures from their hiding places—I simply let nature take its course. In about 15 minutes I retrieve the net to see what's been caught.

What I've gained from this study is an understanding of when some insects, and other aquatic creatures, are actively moving about. For the purposes of this story the message is that during the last week of November and the first week of December, my nets come up relatively empty. The exceptions are the few emerging midges, damselfly nymphs and larger stonefly nymphs, and sculpins and other minnows I take at midday. This finding has led me to concentrate on offering fly patterns during buck season that mimic those particular creatures.

At this time of year, a damselfly pattern is a top choice not only for the natural's activity level but also for the low, clear water conditions. A damselfly nymph is a sizable meal to a trout and one that moves many fish. Variations of the pattern are often the first thing I try during buck season.

HOT TIP #5: A soft hackle of either hen back or partridge gives nymph patterns more movement in the water than the stiff hackle normally used for dry flies.

I once used a lot of large black stonefly nymphs during buck season fishing, and even though I still find the pattern effective, I'm going more and more with the smaller damsel fly creations and leaving the big stone flies for the dead of winter and off-color water.

Minnow activity has greatly slowed during the cold-water period of buck season, but a trout will take a minnow nearly every time one foolishly presents itself. For this reason, I fish either silver or gold metallic minnows for buck season trout. On bright, sunny days I opt for the silver version and on cloudy days, or in off-color water, I go for the gold.

Along the same line, I fish a Wool Head Sculpin in streams where I know sculpins are present in good number. Spring Creek is loaded with sculpins and I would have gone to an olive pattern on my last trip, had the sky been slightly overcast. My netting's have shown that these bait fish are more active on dark days, so I go with what Mother Nature tells me.

I know it seems limited, but that pretty well rounds out my nymph and streamer selection for buck season. The variety is thin, but these patterns have worked everywhere in the state. Besides, my hands are usually too cold to go changing a lot of flies and I feel confident using these patterns.

This year, when the sound of gunfire erupts in the woods, try picking up your trout rod and returning to the waters of your spring conquests. Keep one eye in the field, in case someone with a barrel gets too close, and another on the stream for feeding fish. And if you see me coming along the bank, don't worry—I may ask to see your fly box, but I won't shoot.

ANGLER

DCNR Dedicates Accessible Fishing Pier at Frances Slocum State Park

In its continuing effort to make Pennsylvania state parks more accessible to people with disabilities, the Department of Conservation and Natural Resources (DCNR) recently dedicated an accessible fishing pier at Frances Slocum State Park, Luzerne County. The pier will make it possible for persons with disabilities to fish at the park's 165-acre Frances Slocum Lake.

The pier was suggested by Fish and Boat Commissioner Paul J. Mahon. Mahon also helped select the site and worked in a consulting capacity during construction.

The pier at Frances Slocum Park is part of Project Stewardship—a four-year \$100 million effort launched last November to repair and upgrade facilities in Pennsylvania's state parks and forests. Project Stewardship calls for the repair or replacement of park and forest facilities including buildings, roads, rails, bridges, and water and sewage treatment plants.

Project Stewardship is funded through the Keystone Recreation, Park and Conservation Fund; fees collected at state parks; motor license funds dedicated to state forest bridge repairs; and the state's capital budget.

Established in 1993, the Keystone Recreation, Park and Conservation Fund Act is also known as "Key '93." It uses proceeds from a \$50 million bond issue and 15 percent of the state's yearly realty transfer tax receipts to provide a dedicated funding source for Pennsylvania's parks and forests. Local parks and recreation facilities, natural areas and zoos also receive money from the fund.



DCNR Secretary John Oliver said the state park system is working to make additional park areas more accessible. Currently, 19 state parks have accessible fishing areas. Other parks have modified cabins, trails and hunting areas to accommodate people with disabilities.

Visitors with disabilities can contact the individual parks to discuss how the parks can accommodate their needs. Call 1-800-63PARKS or the Pennsylvania AT&T Relay Service at 1-800-654-5984 (TDD), or visit DCNR's World Wide Web site at <http://www.dcnr.state.pa.us>.

Frances Slocum State Park, the only Pennsylvania state park named after a woman, features boating, camping, swimming, picnicking and winter activities on its 1,035 acres.



Cattle Work to Save Bog Turtles

In mid-May, the Pennsylvania Chapter of The Nature Conservancy may have entered the cattle-grazing business—to help bog turtles. The Chapter's Science and Stewardship Department has begun efforts to research new sustainable agriculture techniques to improve habitat for the rare bog turtle. This effort includes a cooperative agreement with a local farmer and the Partners for Wildlife Program of the U.S. Fish and Wildlife Service.

The new techniques involve limited grazing of beef cattle on portions of bog turtle habitat. Based on accumulating evidence from Natural Heritage programs, Jim Thorne, Director of Science and Stewardship, believes the grazing will improve the turtle's habitat and eventually lead to an increase in turtle populations at the site. The grazing should reduce soil density, making it easier for the turtles to travel and interact, and create hummocks that the bog turtles use for nesting.

"We believe that before European settlers came to the area, marshes and wet meadows that the bog turtles call home were maintained by beaver dams and the grazing of elk and other wildlife. Since Europeans arrived, farming techniques like grazing and burning have helped maintain the habitat," says Thorne.

With the help of Partners of Wildlife and a local farmer, a 13-acre area was fenced and prepared for the release of approximately 12 young bulls for grazing. Thorne and his staff will monitor the preserve and the turtle population and determine the best management practices to protect this tiny threatened species.

The smallest and one of the rarest North American turtles, the bog turtle measures only 4.5 inches across as an adult and is marked by an orange-red blotch on either side of its neck. The hatchlings are only the size of a silver dollar. This secretive creature spends most of its time in its mucky wetland habitat.

The Nature Conservancy's mission is to preserve the plants, animals and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. Across the hemisphere, the Conservancy has helped to protect more than 9.3 million acres of ecologically significant land, including more than 40,000 acres in Pennsylvania.

Founded in 1951, The Nature Conservancy is the largest private land conservation organization in the world, with a membership base of 830,000 nationally and 32,000 in Pennsylvania. The Nature Conservancy's strong focus on saving habitat for plants and animals and its non-confrontational approach have earned it an international reputation in the field.

Fish-for-Free Days in 1997 will be June 7 and September 27.

Anglers Currents

State Agencies Revise Fish Consumption Advisories for Lake Erie and Presque Isle Bay

State officials responsible for monitoring Pennsylvania waterways and protecting public health have recently revised consumption advisories for fish taken from Lake Erie and Presque Isle Bay based on a new protocol developed by the Great Lakes states. The new protocol makes it easier to lower your exposure to contaminants by spelling out exactly how many meals of a particular type of fish you can safely consume without risking adverse health effects.

Under the protocol, meal-specific consumption advice is grouped as following: no restriction, one meal per week, one meal per month, six meals per year or no consumption. One meal is considered to be one-half pound of fish (weight before cooking) for a 150-pound person.

Previously, advisories for Lake Erie and Presque Isle Bay were based on levels set by the Federal Food and Drug Administration (FDA action levels). Those advisories did not contain meal-specific consumption advice—highly contaminated species of fish were simply listed as “don’t eat.”

People who regularly eat sport fish, women of childbearing age and children are more susceptible to contaminants that build up in fish over time. Those people should space fish meals out according to the advisory table listed below. Spacing meals helps prevent contaminants from building up to harmful levels in the body.

Women beyond their childbearing years and men face fewer health risks from contaminants but should also follow the advisories.

The advisories were issued based on elevated levels of polychlorinated biphenyls (PCBs). PCBs were widely used in transformer oils and other electrical products before 1977, when their manufacture was banned. PCBs and most other organic contaminants build up in a fish’s fat deposits and just underneath the skin.

When properly prepared, fish provide a diet high in protein and low in saturated fats. Many doctors suggest that eating a half-pound of fish each week is helpful in preventing heart disease. You can get the health benefits of eating fish and reduce your exposure to contaminants by properly cleaning and cooking your fish as follows:

- **Remove all skin.**
- **Slice off fat belly meat along the bottom of the fish.**
- **Cut away the V-shaped wedge of fat along the lateral line on each side of the fish.**
- **Bake or broil trimmed fish on a rack or grill to allow any remaining fat to drip away.**
- **Discard all drippings. Do not eat them or use them for cooking other foods.**

The new Lake Erie/Presque Isle Bay fish consumption advisories, as well as all fish advisories for Pennsylvania, will appear in the 1997 *Summary of Fishing Regulations and Laws*, issued to all licensed anglers.

For more information on fish consumption advisories, contact the departments of Environmental Protection at 717-783-3638, Health at 717-787-1708 or the Pennsylvania Fish and Boat Commission at 814-359-5147.

Fish Consumption Advisories for Lake Erie (all waters)

Species	Meal Frequency	Contaminant
Yellow perch	No restriction	None
Walleyes under 23 inches	1 meal per week	PCB
Freshwater drum	1 meal per week	PCB
Walleyes over 23 inches	1 meal per month	PCB
Coho salmon*	1 meal per month	PCB
Steelhead (rainbow trout)*	1 meal per month	PCB
Smallmouth bass	1 meal per month	PCB
White perch	1 meal per month	PCB
White bass	1 meal per month	PCB
Lake whitefish	1 meal per month	PCB
Carp under 20 inches	1 meal per month	PCB
Carp over 20 inches	1 meal every 2 months	PCB
Lake trout	1 meal every 2 months	PCB
Channel catfish	1 meal every 2 months	PCB

Fish consumption advisories for Presque Isle Bay

Species	Meal Frequency	Contaminant
Yellow perch	No restriction	None
Bluegills/sunfish	No restriction	None
Rock bass	No restriction	None
Sunfish	No restriction	None
Brown bullhead	No restriction	None
Largemouth bass	1 meal per week	PCB
Walleyes	1 meal per week	PCB
Smallmouth bass	1 meal per month	PCB
Northern pike	1 meal per month	PCB
White perch	1 meal per month	PCB
Freshwater drum	1 meal per month	PCB
Bowfin	1 meal per month	PCB
Carp	1 meal per month	PCB
Coho salmon*	1 meal per month	PCB
Steelhead* (rainbow trout)	1 meal per month	PCB

* Salmon and trout are migratory and found seasonally in Presque Isle Bay and Lake Erie tributary streams. Whether caught in the lake or elsewhere in the region, they should be treated as Lake Erie fish.

1997 Opening Dates: Trout: April 12, Muskies: May 3, Walleye: May 3, Bass: June 14

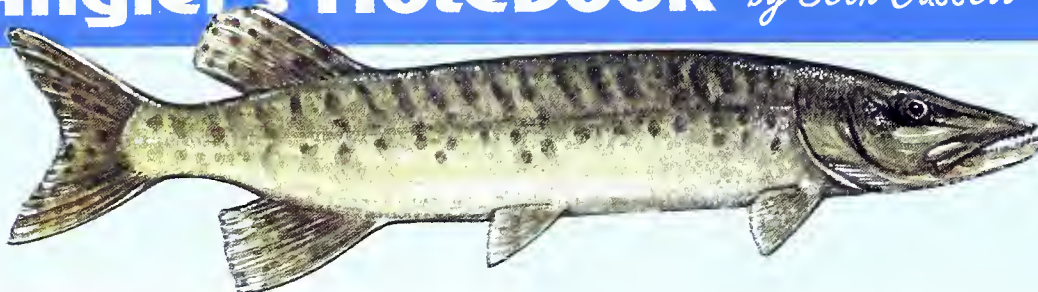
PA Fish and Boat Commission Collector's Edition Knife

The Commission has available a limited number of its new commemorative shad knife. Only 750 of these limited-edition, individually numbered knives will be produced. The cost, including shipping and handling, is \$57.50. Pennsylvania residents add 6 percent sales tax for a total of \$60.95 for each knife. The knife is manufactured by W.R. Case & Sons Cutlery Co. Knives will be ready for shipment early in December. Make checks or money orders payable to *W.R. Case & Sons Cutlery*, and mail orders to PA Fish and Boat Commission, att: Eleanor Mutch, P.O. Box 67000, Harrisburg, PA 17106-7000. If no knives are available, we will return your check. Your knife will be mailed to you by W.R. Case & Sons Cutlery.

Order now to ensure timely holiday delivery!



Angler's Notebook by Seth Cassell



November is a productive time to fish for muskellunge. Muskies often follow a lure to the boat. Instead of pulling out and making another cast, work your lure in a figure-eight motion at the side of the boat. This sometimes entices a reluctant musky to strike.

November smallmouth fishing can be better than you think. Many times, this is when some of the biggest fish of the year are caught. Use grub-tail jigs or hair jigs, and work the pools and pockets of slow water. The key is to be patient, cover the water thoroughly, and work the lure slowly.

For ice fishermen, November is a great time to scout the lakes you plan to fish when the water freezes. Take your boat out, and if you have one, a fish finder, and look for channels, rock ledges, stumps and other types of submerged cover. Once you make a note of where these locations are, you'll be better off when you start drilling auger holes.

Barbless hooks are a wise choice when you plan on catch-and-release fishing, especially when you're going for trout. You need not buy your hooks barbless, though. You can modify them yourself by crimping down the barb with a pair of needle-nose pliers. You'll find that as long as you keep the line tight, you won't lose any more fish than you would if you were using barbed hooks. And best of all, the hooks are easy to remove and do considerably less harm to the fish.

When using tipped jigs, walleyes can often pick at the minnow without getting hooked. To remedy this problem, tie a treble hook to the bend of the jig hook, and extend it out to the minnow's tail. This tactic should help you get more hook-ups when the walleyes are picky.

To make a minnow more attractive to gamefish, clip off a small portion of the tail. This makes the minnow's smell stronger, and makes it move erratically. This ploy attracts many species of gamefish any time of the year.

When fishing topwater lures for bass, light colors, such as yellow, white and pink, are best during the day. Then, once the sun goes down, tie on a darker color, such as black, brown or dark green.

When fishing for most species during November, the best action usually occurs in the afternoon or during the warmest part of the day. Fish are more active during this time and are more willing to take your lures and bait.

When fishing for trout in late fall, live bait usually works best, because the trout are not active. Just about the best bait to use is fathead minnows. Attach the fathead to the hook in the manner you prefer, and cast to a deep hole or along an undercut bank, and wait for a trout to strike. This tactic is more productive this time of year than using fast-moving artificials.



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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illustration- Ted Walke

Notes From the Streams

Van Dyke shad hatchery

In early June, Commissioners Inky Moore, Gary Pflugfelder, and I spent most of the day at the Van Dyke shad hatchery in Juniata County. Mike Hendricks and his staff gave us an excellent tour of the facility and explained the process of spawning the adult shad, hatching eggs and caring for the young fry. They even let me do some "hands-on work" at the station that morning, which I enjoyed very much. Later that afternoon we assisted with a stocking of more than 200,000 fry at the Millerstown Access along the Juniata River.

With the continued efforts at Van Dyke and the completion of fish lifts at the dams on the Susquehanna River, Pennsylvania anglers should be able to have greater opportunities to catch shad in the years ahead.—*Commissioner Donald K. Anderson.*

A grand old bird

Last February, my wife, Dawn, and I were driving along the Susquehanna River just south of Tunkhannock. The river was almost completely frozen over. Dawn saw a large black bird on the edge of a 30-foot piece of open water and wondered what it was. I began to say it was only a crow when a huge mature bald eagle swooped down over our car. The eagle, with a wingspan of more than six feet, must have had claim over this open water because it chased the crow away. We are seeing more bald eagles in Wyoming County, but we will never grow bored of them. What magnificent birds they are!—*WCO Larry Bundy, Jr., eastern Sullivan, Wyoming counties.*

What's in a name?

During my career with the Pennsylvania Fish and Boat Commission I've heard the Commission referred to in various ways, such as the PA Game and Fish Commission, the PA Fishing Commission, the United States Coast Guard, and the PA Game Commission. Recently, I received a letter addressed to the "U.S. Fish & Bug Commission." The interesting thing was that the letter was about amphibious vehicle usage on Commonwealth waters.—*Emil Svetahor, Assistant Regional Supervisor, Southwest.*

All charged up

A man called the Southcentral Region office to report a shocking encounter he and a friend recently had while floating Sherman's Creek in Perry County. Stream flow and current speed were above normal as their journey brought them to a covered bridge, under which they had to navigate. With heads ducked, the duo speedily slipped under the bridge, when, ZAP! They became entangled in a low-hanging live strand of pasture fencing stretched across the stream.

After what seemed like an eternity, relief came only after capsizing and breaking contact with the fence, dumping them into 45- to 50-degree water. Soaked and frigid, the party suffered symptoms of hypothermia onset by the time they traversed the additional two miles of the journey to the warmth of their vehicle heater.

Readers might take heed of this scenario. Always exercise caution when floating our waterways. Expect the unexpected, and be sure to have a change of dry clothing secured in a water-tight container on your journey. Above all, it's always best to thoroughly scout the water you plan to float. As these two floating trout anglers learned, floats through farmland can really get you charged up!—*Guy Bowersox, Assistant Regional Supervisor, Southcentral.*

THANK YOU!

MR. FASCHING

THANK YOU!

Each spring for the past 20 years, Mr. Robert Fasching (WCO, Lackawanna County) has donated his time and knowledge to the students of Abington Heights Middle School, and these students wish to say, "Thank you, Mr. Fasching."

In the spring of 1976, the teachers of Abington Heights Middle School, Team 7, decided that students needed to know more about their local area and how to care for it. A Lackawanna County Waterways Conservation Officer, Bob Fasching, was asked to be the first speaker in a series of programs. He did such a great job that he has been back every year for 20 years as our "kickoff" speaker. The information he presents about our local forests and waters helps students realize that they are in control of their environment and that they can have a real effect on the quality of life in northeast Pennsylvania. Added to that is his historical perspective. Every spring, it's encouraging to hear how this area's environment has improved. Each year he reports on the water quality of the Lackawanna River and relates the story of that water from widespread pollution to a Class A trout stream. He does all this at a time that is the busiest for him, right around the opening of trout season. Even though he's been working many hours, he makes time for our kids. Later, when he's back on "trout patrol," he always returns calls to kids who want more information.

The effect of Mr. Fasching on our area students goes much farther than just his speaking in school. Talking to approximately 130 students each year for 20 years adds up to over 2,000 kids who know and respect the man and his work. As the years go on, he is now talking to sons and daughters of students from former years.

In the first few years, Team 7 students were taken by him to help stock area streams. Now that truck is followed by many former Team 7 students who have learned their love and concern of the outdoors from this patrolman. Many others have gone on to a career in forestry or the environment, largely due to his influence.

Because the teachers and students wanted to act on all Mr. Fasching told us, every year a day-long cleanup takes place at Gardener's Creek in Newton-Ransom. The first year was a massive undertaking, removing years of refuse piled up all over. Returning year after year, teachers and students see the stream improving steadily as the people see that we are serious about keeping our own area clean. It's our way of giving something back to Mr. Fasching for all his help. If you asked our 2,000-plus alumni of Team 7 what they remember most, they'd almost all say, "Cleaning up Gardener's Creek and Mr. Fasching," that very imposing, yet very caring conservation officer.

Thanks, Mr. Fasching!—*The teachers and students of Abington Heights Middle School, Team 7.*

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The Keystone State's Official Fishing and Boating Magazine



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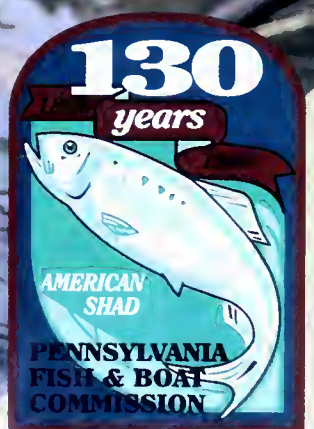
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ANGLER



PROTECT • CONSERVE • ENHANCE

RESOURCE FIRST

Endings . . . Beginnings

This issue of *Pennsylvania Angler* marks the end of an era.

The first issue of *Pennsylvania Angler* magazine was published in December 1931, exactly 65 years before the publication of this issue. Herbert Hoover was President of the United States and our nation was mired in the Great Depression when my predecessors decided to take the leap and start publishing "Pennsylvania's Official Fishing and Boating Magazine." Through the Depression, periods of war and armed conflict, periods of strife and times of peace, floods and blizzards, the *Angler* has been a steady voice providing important information to Pennsylvania's anglers and boaters.

For the first 51 years of its publication, only the cover of the *Angler* was printed in color; the pages were printed only in black-and-white. Then in July 1982, full-color printing graced the inside pages of the magazine for the first time. In recent months, the *Angler* has become even more colorful and valuable to our readers as we added to the pages of the magazine special items such as the newsletter of the Pennsylvania League of Angling Youth (PLAY), the seasons, sizes and creel limits poster, and our water pollution brochure. In this issue on page 16-17 you'll find our 1997 commemorative calendar.

And now the *Angler* faces the biggest change of all as the *Angler* begins its evolution into a new and better publication. Starting with the January/February 1997 issue, the magazine will sport a new name, a new cover design, a new size, a new publication frequency and more regular contributors. The next issue we publish will be called *Pennsylvania Angler and Boater*; a 64-page bimonthly format will replace the old 32-page monthly magazine. We'll offer even more added-value items including the popular Inseason Trout Stocking List.

Why the changes? We want to bring the costs of producing and distributing the magazine more into line with the revenue. Even though we will be producing the same number of pages of content each year, we expect the costs of printing and distributing the magazine will be reduced by about \$78,000 each year based on the new production schedule.

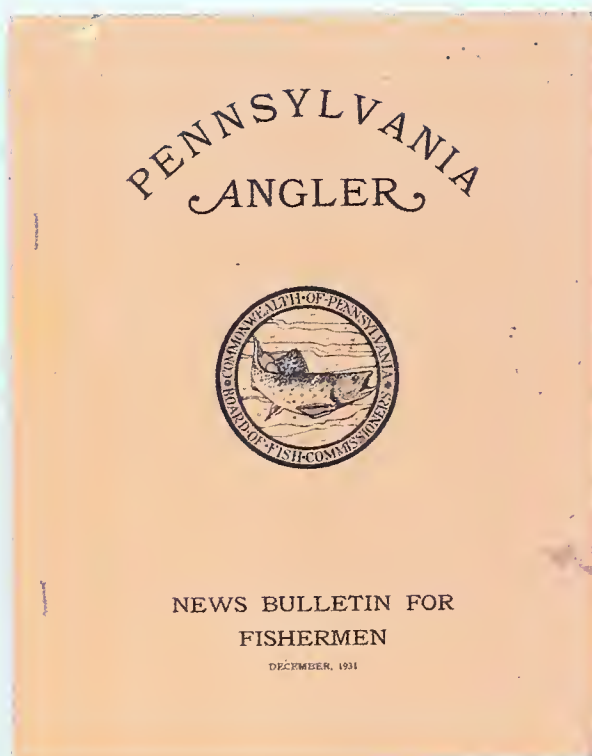
We want to broaden and deepen our editorial coverage to better serve the readers of our flagship publication. A 64-page format will let us provide such coverage.

We want to better address the interests of boaters who read the magazine. Our recent survey of licensed anglers and owners of registered boats showed that a higher percentage of registered boat owners read the *Angler* than the percentage of licensed anglers. Thirty percent of Pennsylvania boaters indicated that they used *Pennsylvania Angler* as a source of information on fishing and boating; only 23 percent of Pennsylvania resident anglers gave the same response. And 60 percent of boaters said they occasionally or frequently read the magazine, while 56 percent of resident anglers did the same.

We want to attract new readers to the magazine while at the same time increasing the enthusiasm and interest of our old subscribers. We know that lots of anglers and boaters read this magazine; we also know that less than 10 percent of those who say they regularly read the *Angler* actually subscribe. We hope a new look will attract more of our readers into the ranks of our paid subscribers.

You can help. If you're not yet a subscriber, why not begin a new subscription with the new year and the new format. The price of an annual subscription will remain the same. If you already subscribe, you know the value of the information you receive with each issue. Why not encourage a friend or relative to join the ranks of our subscribers.

As 1996 comes to an end, with 1997 about to begin and a new millennium just around the corner, Pennsylvania anglers and boaters can pause to reflect on the fishing and boating opportunities they've enjoyed in the past. We can all look forward with anticipation to upcoming days on the waters of the Commonwealth. On behalf of the members and staff of the Fish and Boat Commission, please accept our best wishes for a joyous holiday season and a happy new year.



Pennsylvania Angler, December 1931

Peter A. Colangelo

Executive Director

Pennsylvania Fish & Boat Commission

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Pennsylvania ANGLER

The Keystone State's Official Fishing and Boating Magazine

Panfish on Ice by <i>Darl Black</i>	4
Drinking, Boating and the Law	7
Berks County Ice Cubed by <i>Vic Attardo</i>	9
Pennsylvania Angler Index to Volume 65 (January 1996 Through December 1996).....	13
On the Water with <i>Robert L. Petri</i>	15
PA Fish & Boat Commission 1997 Theme Calendar	16
Commission Update: Boat Titling Regs Proposed by <i>Dan Tredinnick</i>	18
A Look Back at Pennsylvania Fishing Laws by <i>Mike Bleech</i>	19
What a Way to Celebrate New Year's Eve! by <i>Charles R. Meck</i>	23
The Guardians by <i>WCO R. Vance Dunbar</i>	26
Cast & Caught	31

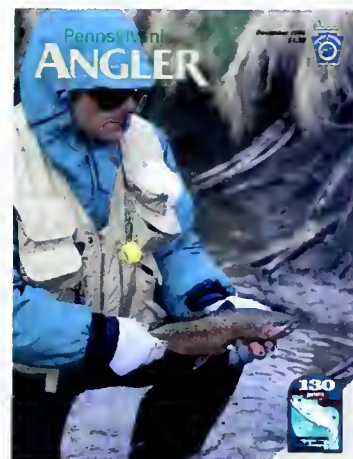
*This issue's cold-water trout catch was
photographed by Barry & Cathy Beck.*

Reader Survey

If you've read Executive Director Colangelo's "Protect-Conserve-Enhance" column on page 2, you have a good idea of why we're making changes to the *Angler*. Surveys are one method among several we've used for some 13 years to stay in tune with readers' likes and dislikes. We conducted the first reader survey in September 1983, and we've conducted several more since. We gather basic facts on readers' ages, interests, and angling and boating preferences in these surveys. As reader interests change, so does our need to change the content and appearance of the magazine.

Very shortly, some 1,500 randomly selected subscribers will receive a survey in the mail. Again we're asking questions about angling and boating preferences, reader likes and dislikes, and other facts. If you receive a survey, please answer all the questions and return the survey to us.

Our desire to produce the best product at the lowest price is a continuous process, and our thirst to know our readers doesn't lessen when surveys are done. When you receive the premier issue of *Pennsylvania Angler & Boater*, please let us know your thoughts on the issue.—*Art Michaels*.



Every winter thousands of Pennsylvania anglers flock to the ice in the hopes of sharing in a coldwater panfish harvest.

Experienced ice anglers say the best fishing is "first ice" of the season—ice that may be marginally safe for a person. However, I want at least 8 inches under me before I walk onto a lake. Most ice anglers chuckle at the thought of waiting until the ice is that thick. "Some winters we never get 8 inches," someone will say.

Perhaps my present-day hesitancy about walking on frozen water goes back to a childhood of ice skating on a small pond on our property. Every winter I was the first one on the ice, and every year I went through the ice. Fortunately, the marshy pond was no more than a couple of feet deep, and the worst that ever happened was a wet leg up to the knee.

But the larger ponds and lakes where ice fishing takes place are deeper and the consequences of going through are much greater. So I wait until things really freeze thick before I venture out.

Basic panfish setup

Some anglers point out that panfish are at their optimum flavor when taken from cold water, and others like to emphasize the finesse needed to extract gills and crappies from under the ice. However, I think most fishermen find themselves on the ice simply out of wintertime boredom.

Whatever your reasons for considering ice angling, if you are going to do it, do it right so you catch fish and not just catch cold.

Longtime friend Harry Onspaugh is an avid ice fisherman. "To catch bluegills and crappies, you have to make an investment in basic equipment," Onspaugh says. "First you need an auger to drill holes. This does not need to be a gas-powered auger. A sharp blade on a hand auger and a little manpower allow you to cut through 10 inches of ice without breaking a sweat."

In addition to the auger, Harry's list includes a skimmer to

PANFISH ON

ICE

BY DARL BLACK

clean floating ice from the hole, several jigging poles with extremely light monofilament line, a handful of panfish ice jigs, and a box of larvae.

"The panfish angler does not need tip-ups or those short graphite poles some ice fishermen use for walleyes," says Onspaugh. "An inexpensive ice jigging rod of fiberglass with a spring bobber tip and plastic reel is best for 'gills and crappies. These rods are only a few bucks each, so buy several of them. Typically, I carry four or five with different ice jigs already tied on. That way I can switch colors quickly without struggling to tie on a new jig with cold fingers."

Harry uses 4-pound test, preferring Berkley's special cold weather line because it does not stiffen in the cold like other monofilament lines.

The basic list of equipment is complete when the angler selects something to carry the tackle. Many anglers choose a large

5-gallon plastic bucket, which they turn upside down to use as a seat on the ice. Others use various types of sleds to cart the equipment.

"If you get serious about ice fishing, you will definitely want to invest in a portable shanty," Onspaugh says. "These may be homemade affairs or commercially made. Some of the new nylon shelters on runners are extremely lightweight, easy to pull, and set up in less than a minute."

Finding the magic spot

"Survey the lake to see where anglers are concentrated, and make your way to that area," says Onspaugh. "Most likely anglers are grouped there because they are catching fish. You can take advantage of their discovery."

In part, ice fishing is a social affair. Generally, fishermen don't mind others setting up nearby—as long as you don't get too close. If asked politely, most anglers are willing to provide advice on how they are catching fish.

In many lakes, bluegills establish their winter home areas near weedbeds or around brushpiles at moderate depths. Generally, crappies are found in slightly deeper water than bluegills, but that is not a certainty. It is possible to catch bluegills and crappies from the same hole.

Onspaugh offers this advice. "Panfish may be taken at any depth from a few feet under the ice all the way to the bottom. If you don't have a depthfinder, the best approach is to start off with your bait about a foot above the bottom. If you don't get

bites after a few minutes, reel it up a foot or two and try there for a few minutes. Keep moving it until you find the level that fish are holding. Use the plastic peg that comes with the reel to stop the line on the spool so you can return the bait to the precise depth."

Most serious anglers don't like the depth guessing-game and insist on a depthfinder.

"A depthfinder is invaluable," says Dan Wielobob, another ice



Some ice fishermen simply do not travel light! Nevertheless, to catch bluegills and crappies, invest in basic equipment.



Avid ice fisherman Harry Onspaugh prefers to fish for panfish. Survey the lake to see where anglers are concentrated, and make your way to that area. Anglers are grouped there probably because they are catching fish.

fishing fanatic. Dan and his brother Jeff use a flasher unit run off two 6-volt lantern batteries.

"Without a doubt you will catch more panfish with a depthfinder," says Wielobob. "First, you will be able to identify suitable sites to drill holes by locating weedbeds, dropoffs, creek channels, brush or stumps. Second, a sonar will show the exact depth that fish are holding. That is so critical."

Wielobob says on many occasions he has been able to match his bait depth exactly to the depth of fish through the aid of the depthfinder. He positions the bait a couple of feet off the bottom so he can see it on the depthfinder. When he observes blips on the screen higher than his bait, he raises his bait to right above the fish.

"When you see one of the lower marks move up and become one mark with your bait, you can anticipate a bite about to happen," says Dan. With the exact depth identified, Dan hauls in fish, while brother Jeff, sitting only a few feet away, must guess at the right depth—until Jeff pries the depthfinder from brother Dan and uses it at his spot.

Onspaugh also recommends a portable depthfinder. "There are reasonably priced ones on the market with a transducer mounted on a swivel-head staff. That



You'll catch more fish if you use a depthfinder. You can best identify sites to drill holes and you can see the specific depth where fish are holding.

allows you not only to survey the bottom under the hole, but 360 degrees around the hole. A transducer that can swing 360 degrees is important because panfish, crappies in particular, may suspend a couple of feet under the ice. A straight-down view misses these fish."

Onspaugh likes variety. He is happy

catching bluegills or crappies, and enjoys being surprised by whatever species is hitting during his time on the ice. Most of his fishing takes place on lakes with heavy weedbeds. One of his guidelines is to fish the deepest weeds, preferably near a depth change or dropoff. The deep weeds usually remain green through the winter, and therefore tend to attract minnows and a variety of panfish.

On the other hand, the Wielobobs prefer to target crappies. Their fishing is generally focused on flatland impoundments with minimum weed growth. During the winter, they find crappies holding along the old river channel. If the channel is 20 to 25 feet deep, the crappies will generally be at 17 to 19 feet right on the edge of the channel, usually at a creek bend with stumps or brush.

"When fishing open water from a boat in the summer or fall, we often find a spot we want to fish during the winter," says Dan. "But when you get out on the ice several months later, those spots are very difficult to locate because things look so different. But with a hand-held GPS (Global Positioning System), I've solved that problem. In the fall when fishing in the boat, we record those new spots as waypoints in the GPS. On the ice, the unit guides us to within a few feet of those dropoffs, channel turns and brushpiles."

Techniques

Onspaugh suggests that novice ice anglers hook up with experienced ice fishermen. "Just like open-water angling, learning from experienced anglers is the best shortcut to getting a handle on the basics."

But he admits that catching panfish through the ice is not complicated. "There are a lot of ice jigs, ice dots, ice spoons and ice flies on the market, but I really don't think it matters which type or style you use. I usually start off with an ant or spider for bluegills, and a pearl dot for crappies. Just be sure to tip it with 'meat'—that means some type of insect larva."

Harry prefers wax worms. Other an-

PANFISH ON ICE

"We catch most of our fish on small jig rods with 4-pound test," says Dan. "However, we use tip-ups to help locate crappie schools. When arriving at an area Jeff and I have not fished before, we drill

a number of holes and set 10 tip-ups scattered through the area. Each tip-up is baited with a small fathead and the tip-up triggers are set as light as possible. Now, realize that crappies are tough to catch on tip-ups because they bite lightly. But by watching which flags go up and by managing to hook one or two crappies, we know over which holes to set the shanty. Locating a concentration of crappies is half the game."

Onspaugh and the Wielobobs say that bluegills can be taken throughout the day. However, they agree that the best crappie bite occurs at dusk and continues into the night until at least midnight. **ANGLER**



glers may choose meal worms or maggots. These larvae, readily available at tackle shops, add scent and taste to the tiny lure.

Onspaugh's advice is to experiment with colors. As light intensity changes, the fish's color preferences often change. One day yellow may be hot. The next day it may be orange. Color preference may change over a period of an hour, too. Keep rods rigged with different colors and change when the bite slows down.

"Rarely do panfish hit an ice jig that is dead still in the water," says Harry. "There must be some movement to the bait. Hold the rod and manipulate the bait to entice strikes. One technique is to shake the rod lightly so the spring bobber barely quivers. Another technique is to raise and lower the rod tip slowly about 6 inches. Every so often inject a sudden jump into the routine. This can attract fish that are some distance from the bait."

The Wielobobs exclusively use small fathead minnows for crappies. Instead of a jig, they use a plain Aberdeen hook with a splitshot about 6 inches above the hook. The minnow is hooked barely under the skin in the back behind the dorsal fin. Dan stresses that it is vital to hook minnows so they remain lively, and he agrees completely with Onspaugh. "Panfish are not receptive to a dead bait."

SAFETY AND COMFORT

The first rule of safety is never to go out on thin ice. Four inches of solid ice may be considered safe for a few anglers to walk on; 6 inches is much safer.

However, lakes never freeze uniformly. Anything that protrudes through the ice is a possible weak spot, including areas around stumps, brush and vegetation. Dock posts and bridge abutments are particularly worrisome because they draw and retain solar energy. Furthermore, the water under bridges and overpasses may never freeze solid. Stay away from these sites.

Rule two is never ice fish alone. Always make it a buddy system. If there is any question about the thickness of the ice in a new area you are entering, walk single file with enough distance between anglers so the second person can undertake a rescue if necessary.

It is advisable that each angler carry an emergency throw bag such as those used in water rescue. And every ice angler should have a pair of "grippers" at the ready tucked just inside the coat sleeve. Grippers are nothing more than long spike nails attached to a heavy cord running up the sleeves of the overcoat and across the shoulders. They may be used to pull yourself onto firm ice if you go through.

In terms of comfort, one-piece winter suits are the warmest clothing on the ice because they eliminate drafts up the backside. Since much of the body's heat escapes from the head, always wear some sort of hat, even if you do not normally do so. If you are going to be fishing in the open without a shelter, be sure you have a hood on your coat. What may be barely a breeze onshore turns into a cold wind on the open lake.

Take several pairs of gloves and mittens because one pair is bound to get wet. Mittens are warmer than gloves. When working on tackle or with fish, simply slip them off.

Footwear is also critical. If your feet get cold, it ruins the outing. Boots with felt packs are warmest. Removable felts may be taken out for drying each night. Ice cleats should be strapped to the boots to ensure firm footing.

Finally, Jeff Wielobob says he never ventures out on the ice without his thermos of coffee and some candy bars. "A hot liquid and a sugar fix can keep you going on those cold afternoons on the ice."—DB.

Drinking, Boating and THE LAW



Are boating and alcohol compatible? Alcohol is the most commonly used drug in the U.S. Many people who use it are not aware of its dangers. Alcohol affects judgment, balance and vision. All of these faculties are integral components to boat operation. If any of the senses is affected, the likelihood of a boating accident increases. When mixing unpredictable water conditions, reckless behavior and alcohol, the combination is often tragic.

May I drink in my boat?

This answer depends on several variables including where you boat, how much you drink and other laws that pertain to alcohol. Alcohol is prohibited on land and water at all Pennsylvania state parks, U.S. Army Corps of Engineers property and on many other waterways in the Commonwealth. Check with the local authorities before bringing alcohol into an area. In some places it is legal to drink on a boat. However, laws such as public drunkenness, disorderly conduct and underage drinking apply both to the operator and the passengers.

It is illegal to operate a watercraft on all the waters of the Commonwealth while under the influence of alcohol or a controlled substance.

How is my judgment affected?

Alcohol reduces the brain's ability to integrate information from the five senses. Alcohol slows the messages to and from the brain. After a drink or two, you may think you are a better boater, but you may fail to detect hazards and maintenance problems. Your response time to these problems is also slowed. Alcohol increases risk-taking and causes daredevil behavior in some people. It leads us to believe that we can do things beyond our capability. This behavior is common among alcohol users, and when it occurs on the waterways, the consequences are often fatal.

Is my balance affected?

According to laboratory studies, balance is one of the first things impaired by alcohol consumption. Even a small amount of alcohol causes a lack of stability. You may not notice a decrease in your balancing ability, but your inner ear and body do. Most boating fatalities in Pennsylvania are caused by capsized boats and falls overboard. An intoxicated person in dark, murky water might swim downward, unable to find the surface. Even the

strongest swimmer impaired by alcohol might be unable to react properly when pitched unexpectedly into the water.

What is meant by "under the influence"?

If chemical testing shows that the amount of alcohol by weight in the blood of a person is 0.10 percent or more, the person is under the influence as defined by law. However, if the amount of alcohol by weight in the blood is in excess of 0.05 percent but less than 0.10 percent, that fact may be considered with other competent evidence in determining whether the person was or was not under the influence of alcohol.

How many drinks will make me feel intoxicated?

You may be surprised how few drinks it takes to weaken your boat operating ability and judgment. Alcohol has varying visible effects on people. Some will slur words and stagger. Others may exhibit no signs. However, both people may be intoxicated and their abilities may be impaired. Alcohol effects vary with each individual according to food consumption, body weight, chemical makeup, personal drinking history and how fast a person consumes alcohol. These effects are intensified by additional stressors on the water, which include sun glare, boat vibrations, wind, waves, current and noise levels.

Is beer less intoxicating than whiskey?

A bottle of beer or a glass of wine has about the same amount of ethyl alcohol as one ounce of gin, scotch or whiskey. The amount of alcohol a person drinks, not the kind of beverage, determines how intoxicated that person is.

Does alcohol cause tunnel vision?

Although alcohol doesn't directly affect the eyes and vision, the ability to perceive what is seen may become distorted because alcohol slows the messages to and from the brain. Concentration is also decreased, which causes many people to focus only on what's directly in front of them.

Does alcohol warm a cold person?

No. The body cools faster when alcohol is introduced into the system. Alcohol dilates the blood vessels, increasing heat loss. A few drinks can shorten survival time if a boater is unexpectedly immersed in cold water.



Drinking, Boating and THE LAW



What is a quick way to sober up?

There is no quick way. A cup of hot coffee or a cold shower will only make a drunk wet and wide awake. It takes approximately one hour for a drink (12 ounces of beer, 5 ounces of wine or one ounce of hard liquor) to leave the body of an average-sized person. A person could remain intoxicated for hours or even the next day after drinking.

How will the law enforcement officer test me to determine if I am under the influence?

A Waterways Conservation Officer, having reasonable suspicion to believe a person is operating or in actual physical control of the movement of a watercraft while under the influence of alcohol, may request that person to submit to a preliminary breath test. This test may be administered before arrest. Other field sobriety tests have been developed and are approved for this purpose.

Does the law enforcement officer require my permission to test my blood alcohol content?

Any person who operates or is in actual physical control of the movement of the watercraft, upon, in or through the waters of the Commonwealth shall be determined to have given consent to one or more chemical tests of breath, blood or urine for the purpose of determining the alcohol content of blood or the presence of a controlled substance. The Waterways Conservation Officer must have reasonable grounds to believe that the person has been operating or has been in actual physical control of the movement of the watercraft. If any person placed under arrest for operating a watercraft under the influence of alcohol or controlled substance is requested to submit to chemical testing and refuses, the test shall

not be conducted. But the Commission shall suspend the boating privileges of the person for a period of 12 months. In addition to suspending boating privileges for one year, the fact that the defendant refused to submit to chemical testing may be introduced in evidence along with the other testimony concerning the circumstances of the refusal.

What happens if I am caught?

The penalties for operation of a watercraft while under the influence of alcohol or a controlled substance could lead to a fine of not less than \$250 nor more than \$5,000, or imprisonment not exceeding 90 days, or both, plus the loss of boating privileges for a period of 12 months. Homicide by watercraft while under the influence carries a fine of not less than \$5,000 nor exceeding \$15,000, or imprisonment of no less than three and no more than seven years, or both. In addition to the offenses described above, operating a watercraft under the influence may also violate other laws. These may include prohibitions against reckless or negligent operation of boats, public drunkenness, disorderly conduct and underage drinking.

Why not boat safely?

Safe boating operation requires a clear head, steady hand and observant eye. Alcohol diminishes these necessary ingredients for a safe and pleasurable day on the water. If you think enough of friends and loved ones' lives to stop them from driving a car after having too much to drink, why not do the same when you're on the water? Impaired skippers not only endanger their lives and their passengers' lives, but they can also ruin the lives of other boaters.

PFBC Regional Law Enforcement Headquarters

Northwest Region

P.O. Box 349
Franklin, PA 16323
Ph. 814-437-5774
Counties: *Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango, Warren.*

Southwest Region

236 Lake Road
Somerset, PA 15501-1644
Ph. 814-445-8974
Counties: *Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland.*

Northcentral Region

Box 187
Lamar, PA 16848
Ph. 717-486-7087
Counties: *Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, Lycoming, McKean, Northumberland, Potter, Snyder, Tioga, Union.*

Southcentral Region

1704 Pine Road
Newville, PA 17241
Ph. 717-477-5717
Counties: *Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lebanon, Mifflin, Perry, York.*

Northeast Region

Box 88
Sweet Valley, PA 18656
Ph. 717-477-5717
Counties: *Bradford, Carbon, Columbia, Lackawanna, Luzerne, Monroe, Montour, Pike, Sullivan, Susquehanna, Wayne, Wyoming.*

Southeast Region

Box 8
Elm, PA 17521
Ph. 717-626-0228
Counties: *Berks, Bucks, Chester, Delaware, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill.*

State Headquarters:

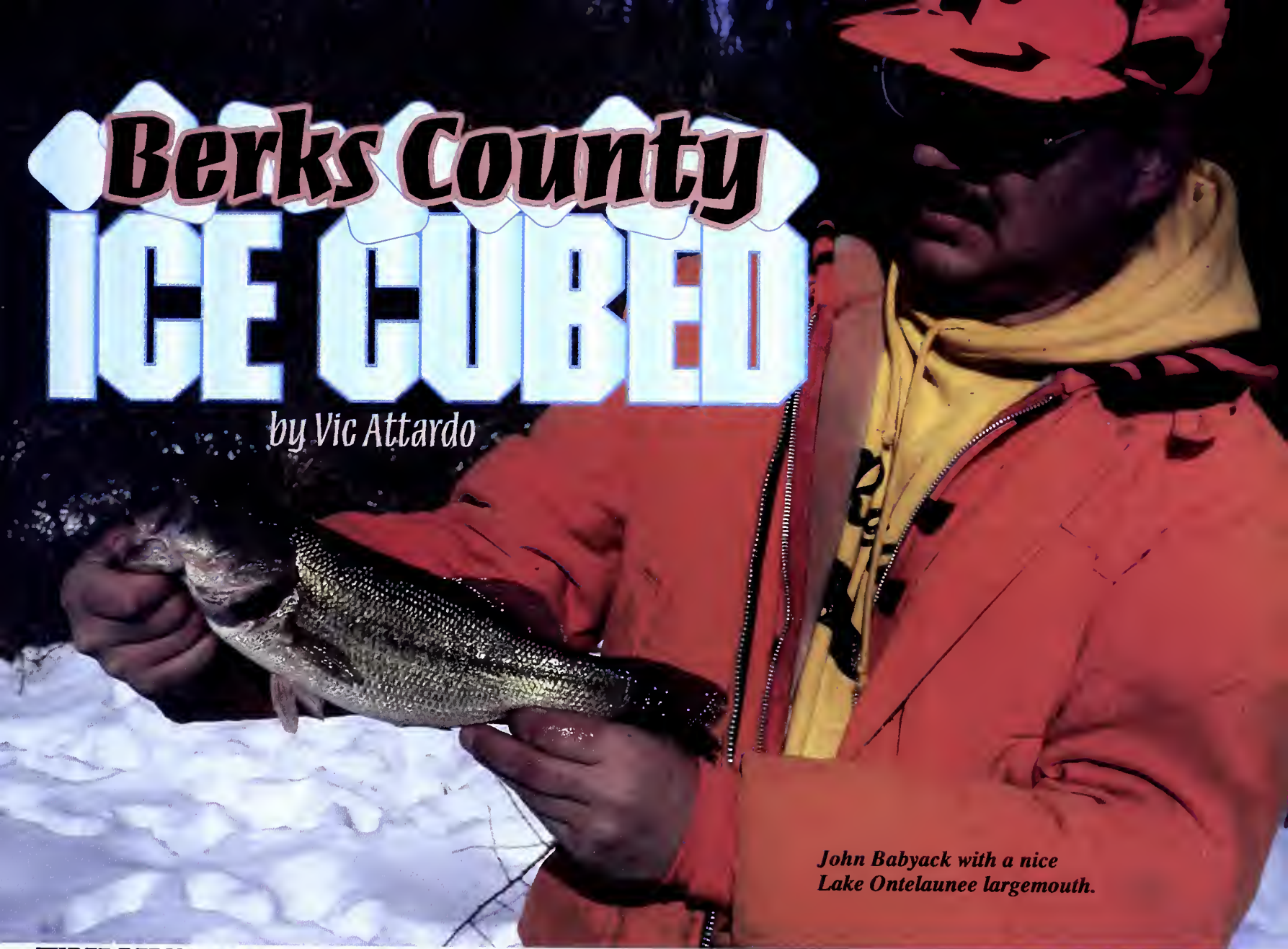
Bureau of Law Enforcement
3532 Walnut Street
P.O. Box 67000
Harrisburg, PA 17106-7000

Ph. 717-657-4542



Berks County ICE CUBED

by Vic Attardo



*John Babyack with a nice
Lake Ontelaunee largemouth.*

THREE BERKS COUNTY LAKES

come to mind when considering where to go ice fishing in the southeastern corner of the state. In order of their size, but not necessarily their importance, anglers can choose among Blue Marsh Lake above Reading, Lake Ontelaunee at Maiden Creek and little Antietam Lake, situated between its two big brothers, west of Oley.

Together, these three lakes make a circuit around the industrial city of Reading, and it's an orbit ice anglers can travel in an hour if fishing at any one location is not up to par.

Each of the three lakes is noted for excellent winter panfish, but the reservoirs' frozen waters give out other prizes as well. In the cold season, Ontelaunee and Blue Marsh are hot crappie lakes, with a special premium on bruiser-sized largemouth bass. Antietam also has plenty of panfish, but the winning entry at the little lake is stocked trout.

All the lakes lie in the famous Reading Prong, a geological distinction that features formations from the Lower Paleozoic and Precambrian eras. This may

not mean a lot when balancing yourself on a few inches of frozen water, but it sets the stage for their surroundings and offers clues to the structure you'll find beneath the ice.

Antietam and Ontelaunee are managed by the city of Reading, while Blue Marsh comes under the purvey of the Army Corps of Engineers. The importance of this fact is that Reading does not permit any watercraft on either of its two charges. Consequently, the depths of Antietam and Ontelaunee are unreachable during the wet season. However, when the water turns hard, fishermen can go almost anywhere their cleats and rubber soles can take them. Toting tip-ups and ice rods, anglers can now plumb the limestone outcrops of Ontelaunee and work the steepest sandy dropoffs at Antietam.

On the other hand, the 1,150 acres of Blue Marsh's flooded farms and woodlots just seem harder to reach, and more imposing, when ice-covered. I know—Blue Marsh gives me the willies when standing over 30 feet of water and the ice starts creaking.

Ontelaunee

In a way, Ontelaunee is the most accessible of the big Reading brothers. Paved public roads encircle most of the lake and in many places the roadway is only a few feet from the shoreline. However, there are other spots on the reservoir that can be reached only by a long walk, and these locations are worth seeking. There is one area of the lake that ice fishermen cannot touch, and that is a small zone off Route 73 reserved as a wildlife propagation area. The hands-off policy seems justified. During the middle of winter last year, I saw a massive armada of over 6,000 snow and blue geese crammed into this sector.

On a cold but blazingly bright December afternoon, I slid across Ontelaunee into a cove along the main highway. It's a popular place for ice fishermen, with water depths of 4 to 15 feet and a substantial limestone dropoff close to the guardrail. There I met Frank "Butch" Nebroskie of Minersville. You couldn't miss spotting Butch—he was surrounded by a sizable collection of crappies and perch.

A lot of ice anglers scoop up all the latest

Berks County

ICEFISHED

equipment from the tackle store shelves, but Nebroskie's ice gear could best be described as Spartan. Instead of a "shortie" rod, he was using an old, full-size pole more suitable for a summer's outing; to prop the rod tip over the drilled hole, he had picked up a plastic jug—not exactly a tackle manufacturer's dream. Yet on the business end of the rod, Butch had what it takes to attract the fish. He was using the time-tested method of a jig-and-minnow, plus he was wisely using 4-pound-test line.

HOT TIP #1: When ice fishing always try to use the thinnest diameter line possible. Beneath the ice, the cold water is usually crystal clear and the fish get a good long look at your offering.

Butch was letting the minnow do all the work for him. Instead of jigging, which is necessary with other live bait, Nebroskie simply let the minnow's struggles call in the gamefish. He carefully lowered his line into the eight-inch hole so that the jig was stationed 1 1/2 feet off the bottom. When the lure hit bottom, he raised it with a few turns of the reel handle.

The presentation of a jig-and-minnow was working on the crappies and perch. Time after time, he attracted one of these two very desirable species with this simple but effective technique.

But this presentation wasn't as successful on the massive amounts of bluegills that were in the cove that afternoon. For that species I turned to Chuck Krammer, also of Minersville.

"Bluegills don't eat minnies," Krammer announced as he drilled a hole no farther than 15 feet from Nebroskie's. Krammer had staked out a submerged gully that ran across the cove. Experience and landmarks indicated the location of the trench, he said.

Standing over his opening to the lake, Krammer

lowered a short ice rod and promptly connected with a feisty bluegill. He continued this activity so fast that I was drawn to discover his secret. It turned out his technique was radically different from the crappie angler's, but just as effective for his chosen target.

To start, Krammer was using a 1/32-ounce white jig with a size 10 hook. Affixed to the hook was a squiggly little waxworm.

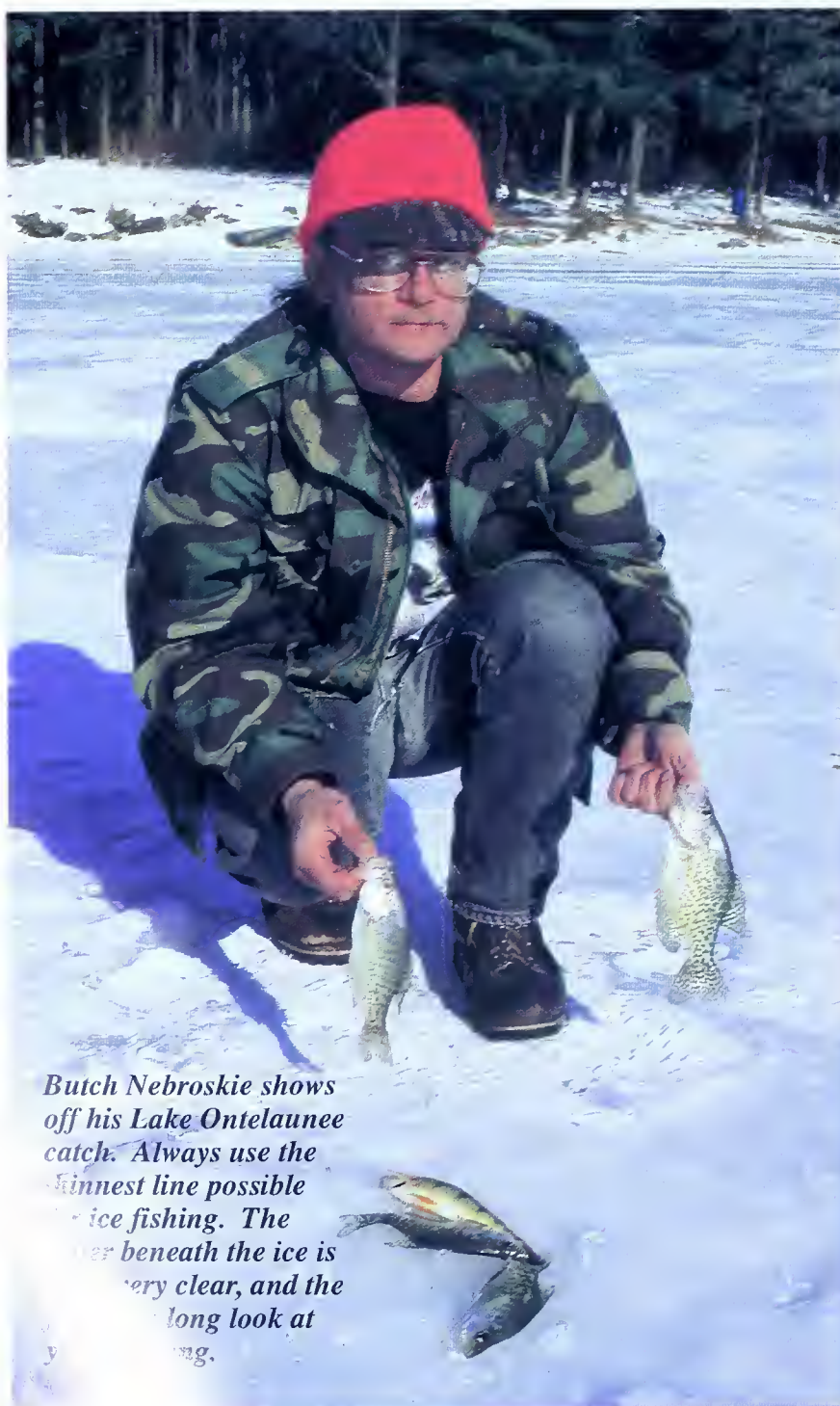
But the most important aspect to Krammer's game was his body language. Unlike many ice anglers, he did not rest the rod on the ice after lowering the bait to the bottom. Instead, when the lure touched Ontelaunee's hard strata, he gave it a brisk movement by raising the rod with his arms, not pulling in line on the reel.

Krammer would drop the line to the bottom and then slowly bring it toward the surface by lifting his arms over his head. The lure came up gradually and he jigged the offering erratically. When he got to the point where his arms were as high over his head as he could reach, Krammer would drop the rod quickly so the jig would stop abruptly about six inches from the bottom. That was the moment when he got most of his hits. The rod would come to

a sudden halt, the tip would flex, and Krammer would set the hook with a hard upward sweep. Then, with a few turns of the reel handle, the bluegill came to the surface where the angler would remove it and send it back down the hole.

His success with this method was so regular that it got to the point where I could anticipate the strikes based on the placement of his arms. Most ice-fishing techniques are based on a slow presentation. Krammer's was based on wild jigging. And it was an amazingly successful style. For the heck of it, I showed this technique to another ice angler at Blue Marsh one afternoon. The angler had been going fishless, despite some heavy activity on his sonar unit. When he jigged his lure and waxworm the way Krammer had showed me, the little dots on the sonar became landed 'gills.

Peter's Cove on Ontelaunee's eastern shore is the noted hotspot for coldwater bass. The chosen frozen gather there more than at any other location on the lake to hunt for largemouths. Peter's Creek empties into the cove beneath a railroad bridge and prime locations follow the creek channel up and across the shallow bay.



Butch Nebroskie shows off his Lake Ontelaunee catch. Always use the thinnest line possible for ice fishing. The water beneath the ice is very clear, and the fish get a good long look at your offering.



Blue Marsh Lake is easily accessible off Route 183 northwest of Reading. Lake Ontelaunee is located north of Reading between US Route 222 and Route 61. Tiny Antietam Reservoir is east of Reading between Hill and Antietam roads.

If you're new to the lake, just follow the other ice fishermen. In some places they're situated in a perfectly straight line above the creek channel, as if cueing up to a ticket office.

John Babyak of Reading had found a spot near the outflow of the creek and the key location had resulted in a number of largemouths. To attract the big bruisers, Ontelaunee's ice anglers don't use waxworms or small minnows. Though there's always the chance a bass will swallow everything from orange peels to tree bark, to catch these iced bass the regulars use shiners of 4 to 5 inches in length. When I saw him, John was proudly showing off a nice 14-inch bass he had landed on a tip-up.

Another bass had gotten away. Babyak's shiner rode a size 4 hook on 8-pound-test line before the bass found it. Having lost the first fish, he let this bucketmouth scurry for over 10 yards before he set the hook.

HOT TIP #2: When fishing tip-ups for largemouths, let the fish run with the bait, stop and begin a second run. When the second run begins, set the hook.

You'll find anglers using all sorts of equipment at Ontelaunee to catch largemouths. The majority use tip-ups with submerged reels; others use short ice rods or even prop long rods above the ice holes. But despite the tackle, iced bass is a game of letting the shiner do its thing. No jigging or erratic movement is required.

Ontelaunee traditionally gives up some of its nicest fish with early and late ice.

Reports of bass of 5 to 8 pounds are normal for the lake. But the reservoir also rewards anglers with plenty of mid-size fish throughout the season, and you may feel safer standing on the thicker stuff.

Antietam

Dense woodland, steep rocky cliffs and a pretty little creek are part of Antietam's natural beauty. With only 17 acres of water, you might consider Antietam more of a pond than a lake. But this small impoundment created by the damming of Antietam Creek serves as another source of water for the surrounding communities, and its bowl-like bottom indicates a manmade reservoir.

On windy days, when Ontelaunee and Blue Marsh are like open freezers, sheltered Antietam can be more comfortable. When the sun shines high and bright, and reflects off the snow-covered rocks, ice fishing here can be downright pleasant. I particularly enjoy visiting this lake because it's located among a collection of pocket valleys where winter hawks hunt in large numbers. My eyes are often turned toward the sky, looking for accipiters and buteos, as much as down on the ice waiting for tip-ups to pop. Bring your binoculars on a trip out here. I also like Antietam because you can watch all the other fishermen on the water. Somebody who is really whaling away at the trout is likely to get a visit from someone who isn't.

From Route 73 at Oley, a winding country road encircles the lake, and you can park in a number of pull-offs beside the

water. Still, you may have trouble climbing down the rocky tracks particularly if they're covered with ice. A small parking lot lies at one corner of the reservoir, and you can safely access the entire lake by parking there.

Panfish are common in Antietam, and it does hold a few largemouths, but the Commission gives this Berks County jewel three late-season trout stockings, in October, December and again in February. The result, for ice fishermen, is plenty of browns and rainbows.

HOT TIP #3: Because Antietam has a soft, sand and silt bottom, occasionally bouncing your bait in the muck raises little clouds of mud that attract minnows and, in turn, larger fish—this is the kind of fact in which some geological knowledge of your fishing hole pays off.

One January afternoon I watched Ron Kiefer of Oley work Antietam's frozen surface for trout. He was using a gold willow-leaf jig adorned with a waxworm. His reel was spooled with thin, 4-pound-test monofilament and in place of a tip-up he was using a bobber.

HOT TIP #4: Trout anglers regularly add a few waxworms to their jigs. The extra wiggling tails seem to attract the interest of trout.

Ron explained that the trout were very fastidious and if they felt any added resistance on the line, they'd drop the bait. To solve this problem Kiefer was using



Pennsylvania angler Ray Leibold works two rods. Remember to try Antietam Reservoir for trout this season. Three late-season stockings (October, December and February) mean plenty of fish. When you try for trout, add a few waxworms to your jigs. The extra wiggling attracts the interest of trout.

a trick, which under other circumstances I would have thought unskillful. Instead of keeping a tight line from reel to bobber, he had several inches of slack line between the rod tip and the floating indicator.

Fishing in 12 feet of water, Kiefer waited patiently as the bobber began to bounce from the first nibbles of a cold trout. The angler started to tense as the bobber became more animated and he reached for his pole. But not until the float went under and the slack line straightened indicating that the fish was pulling away—did he grab the rod and set the hook.

The presence of the slack line appeared strange to me, but the technique clearly

worked. I saw Keifer nab a nice rainbow from Antietam's soft bottom and he told me this method usually accounted for a number of fish.

Blue Marsh

Above 20 feet of Blue Marsh water, Commission Area 6 Fisheries Manager Mike Kaufmann and his friend, Bob Jones, stood jigging and watching tip-ups for signs of marauding crappies.

Blue Marsh is the biggest and most imposing of the Reading three. In actual size, its 1,150 water acres are not much larger than Ontelaunee. But Blue Marsh is built differently. It has long, straight shorelines and fewer coves than its nearby

cousin. Consequently, you must walk a long way over the ice to reach the established dropoffs and flats where fish hang out in winter. But Blue Marsh has crappies, good crappies, and the walk can be worth the trouble.

This deep-dish reservoir is heavily fished in the wet-water months, but in winter, while ice fishermen concentrate in a few popular locations, much of the lake is deserted. It was to one of these deserted areas off Route 183 that Kaufmann and Jones had hiked.

Unpacking their gear, the two men set tip-ups off a point near the deepest part of the lake. The feature fell away rapidly from the shoreline. Since their hooks did not get hung up on the bottom, Kaufmann believed there was very little structure below them.

Initially they drilled their eight holes in a long line covering about 2/10 of a mile. They moved their tip-ups twice, zigzagging them across the lake channel. The second time they moved their baits, the two anglers began collecting a lot of crappies.

"It was by luck we found the spot," Kaufmann said. "We picked the area because it was off a point and we could stretch the tip-ups out a long way."

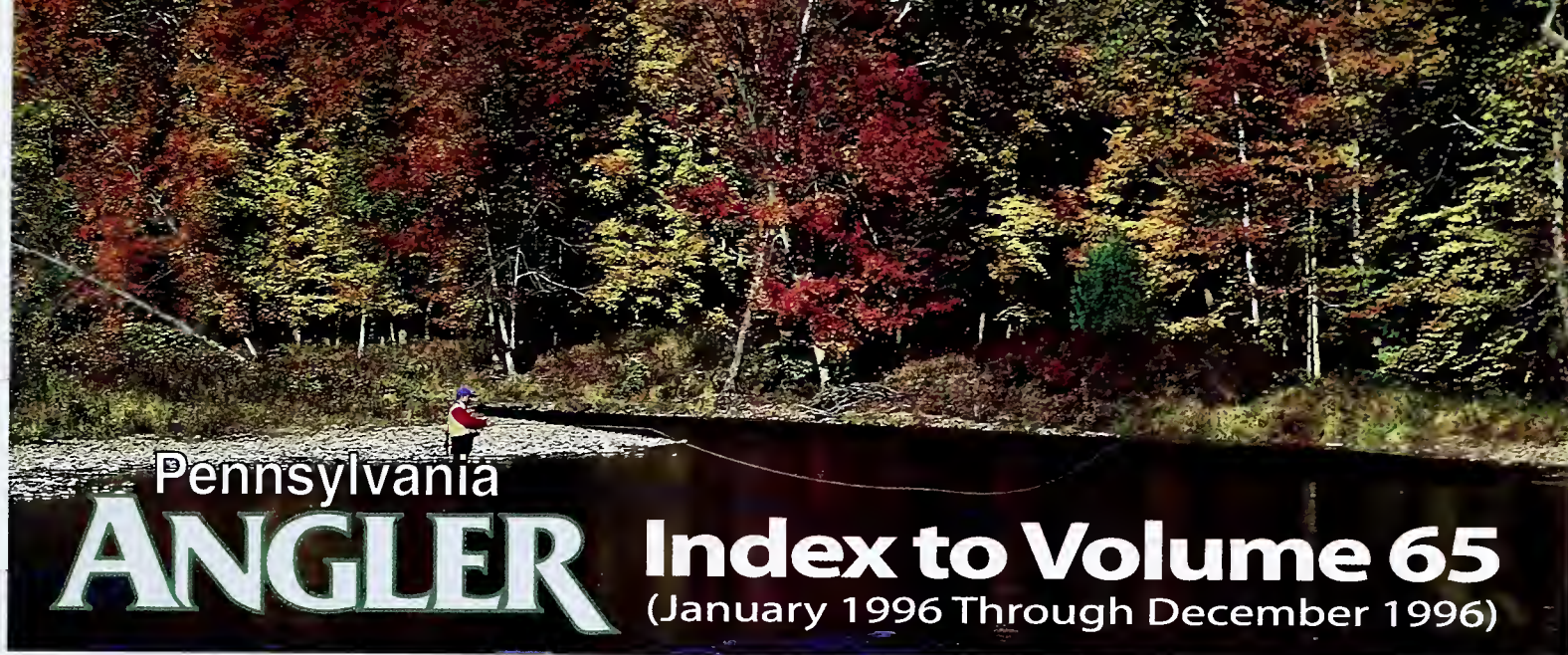
HOT TIP #6: By covering a lot of water in an unfamiliar location you can increase your chances of finding a school of fish. Once found, move your equipment and concentrate on the area where the fish are located.

Kaufmann and Jones were jigging and using tip-ups baited with 1 1/2-inch fathead minnows about 18 inches off the bottom. They were also using waxworms and "spikes," the larvae of the white fly. The minnows turned out to be the hot ticket.

"The plain jigs were ineffective," Kaufmann said. "We put minnows on the jigs and did somewhat better, but we did our best with the tip-ups and a small bobber."

Kaufmann said the crappies sometimes stole the bait without ever raising the flag, and sometimes there was a fish on the end of the line and the flag never popped. Facing this problem, Jones decided to try fishing with tiny bobbers and the system worked splendidly.

Undoubtedly there are other techniques tried by anglers in the Reading-area waters. But test these lakes and the methods of these successful fishermen—for being cold on the ice is often better than having a cabin fever.



Bass, Bass Fishing

Jerk Baits for Bass. Mike Bleech. Jun. 7.
Southeast PA's Summertime Smallmouths. Vic Attardo.
Jul. 26.

Boats, Boating

Difficult Launches and Retrieves on PA's Rivers.
Art Michaels. Oct. 4.
GPS is No Gadget! Curt Garfield. Jun. 20.

Carp, Carp Fishing

Pennsylvania Best Carp Fishing. Apr. 13.
Ya' Gotta Have a Hat. Mike Bleech. Jul. 7.

Catfish, Catfish Angling

PA's Top 36 Watersways for Larger Channel Catfish.
Aug. 31.
Two Cats from Out East. Mike Bleech. Aug. 23.

Cooperative Nurseries

Orange Water and Trout. Mike Sajna. Nov. 10.

Crappies, Crappie Fishing

Lake Redman Crappies. Seth Cassell. May. 4.
Shenango Lake: Hotbed for Crappies. Darl Black. Apr. 23.

Delaware Canal

Delaware Canal, The. Vic Attardo. Jun. 4.

Fish, Fishing

All About Hooks. Darl Black. Jul. 19.
Branches of the Juniata. Mike Bleech. May. 16.
Fish Restoration and Passage on the Susquehanna River.
Feb. special 16-page addition.
How to Avoid 11 Common Float fishing Mistakes.
Gerald Almy. May. 7.
Jigging Spoons Know-How. Darl Black. Sep. 21.
Kinzua Creek Watershed. Robert L. Petri. Jan. 19.
Look Back at Pennsylvania Fishing Laws, A.
Mike Bleech. Dec. 19.
Looking Back on Opening Day.
Photos by Dan Martin. Sep. 15.
Our Overlooked Creeks. Mike Bleech. Jul. 23.
Southeast Pennsylvania Timetable. Vic Attardo. Jan. 9.
Wintertime on the Three Rivers. Darl Black. Feb. 4.
Yellow Creek Watershed. Mark A. Nale. Jan. 23.

Fishing Stories

Beginner's Luck. Marilyn Dyne. Nov. 15.
Medix Run Rivalry. Gregory J.A. Moore. Oct. 7.
There's a Very Large Trout in Birch Pool.
Jim Bashline. Feb. 11.

Fly Fishing, Fly Tying

Beadhead Pheasant Nymph, A. Chauncy K. Lively. Jun. 11.
Burnt-Wing Quill Gordon, A. Chauncy K. Lively. Nov. 13.
Crayfish for the Long Rod, A. Chauncy K. Lively. Jan. 13.
Flying Ants of the Juniata. Vic Attardo. Sep. 17.
Green Drake Mystique, The. Charles R. Meck. May. 24.
It's Hendrickson Time! Charles R. Meck. Apr. 7.
Making and Using the Spiralator. Chauncy K. Lively.
Aug. 21.
Orange Fish Hawk, The. Chauncy K. Lively. May. 11.
March Brown Dun, The. Walt Young. Apr. 15.
Spiralated Isonychia Nymph, A. Chauncy K. Lively.
Sep. 13.
Streams for Catching January Trout. Charles R. Meck.
Jan. 16.
What a Way to Celebrate New Year's Eve!
Charles R. Meck. Dec. 23.
White Flies on the Upper Susquehanna River.
Charles R. Meck. Jul. 4.

Hawk Mountain

Hawk Mountain: Fishing the Flight Path. Vic Attardo.
Feb. 24.

Ice Fishing

Berks County Ice Cubed. Vic Attardo. Dec. 9.
Ice Fishing at Laurel Lake (Pine Grove Furnace State Park).
Seth Cassell. Jan. 27.
Panfish on Ice. Darl Black. Dec. 4.

Lake Arthur (Moraine State Park)

Lake Arthur Walleyes. Darl Black. Nov. 17.

Lake Wallenpaupack

Don't Overlook Lake Wallenpaupack! Darl Black. Sep. 4.

Muskellunge, Muskellunge Fishing

Do Muskies Eat Other Gamefish? Dave Miko. Aug. 10.
Live-Baiting for Muskies. Mike Bleech. Sep. 8.

On the Water

Master Reels. Charles F. Waterman. Jan. 15.
Happy Birthday, T.R. Robert L. Petri. Feb. 15.
"Doing Any Good?" Robert L. Petri. Mar. 27.
Tucked-Away Places. Robert L. Petri. Apr. 14.
Dimple Fishers, The. Charles F. Waterman. May. 13.
Hidden Bass. Charles F. Waterman. Jun. 13.
Around the Island. Robert L. Petri. Aug. 15.
The Log. Robert L. Petri. Sep. 16.
Fishing Buddies. Robert L. Petri. Oct. 18.
Revisiting Our Angling Roots. Robert L. Petri. Nov. 23.
The Mystery Fish. Robert L. Petri. Dec. 15.

Panfish, Panfishing

Pedal-Power Panfish. Darl Black. Jun. 16.

Pennsylvania Fish & Boat Commission

1997 Seasons, Sizes and Creel Limits. Oct. 16.
Annual Report, Fiscal Year 1994-95. Jan. 7.
Bass Season/Harvest, Targeting Proposals Withdrawn.
Dan Tredinnick. Apr. 20.
Calling All Clubs! Feb. 16.
Commission Update. Sep. 30, Nov. 16, Dec. 18.
Drinking, Boating and the Law (special publication). Dec. 7.
Educators: Get Caught in Our Net! Sep. 7.
Fish Scale Sketch of the Pennsylvania Fish & Boat
Commission. Oct. 23.
Guardians, The. WCO R. Vance Dunbar. Dec. 26.
Highlights of the January PA Fish & Boat Commission
Meeting. Dan Tredinnick. Mar. 20.
Lord of the Fish. Susan Q. Stranahan. Aug. 4.
Pennsylvania Angler Index to Volume 65. Dec. 13.
Pennsylvania Fish & Boat Commission 1997 Theme
Calendar. Dec. 16.
Ralph W. Abele 75th Birthday Observance. Jul. 12.
Update: Easton's Lehigh River Fishway. Dave Arnold.
May. 6.
Why Tag Fish? Vic Attardo. Sep. 24.

Pickerel, Pickerel Fishing

PA's Plentiful Pickerel. Bob Butz. Jul. 10.

PLAY Newsletter

Summer 1996. Inserted into Sep. issue.
Fall 1996. Inserted into Nov. issue.

Protect, Conserve, Enhance

(all by Executive Director Peter A. Colangelo)

Matter of Priorities, A. Sep. 2.
Listening to the Customer. Oct. 2.
Regulatory Process at Work for You. Nov. 2.
Endings...and Beginnings. Dec. 2.

Shad, Shad Fishing

Flies, Flutterspoons and Darts: Upriver Shad Fishing.
Vic Attardo. May. 20.
Shad Fisherman Extraordinaire. Vic Attardo. Mar. 10.

Striped Bass, Striped Bass Hybrids

Blue Marsh Lake Stripers. Vic Attardo. Apr. 4.
SMART Angler's Notebook (all by Carl Richardson)

Tips on Tip-Ups. Jan. 31.
Ice Fishing and Jigging. Feb. 31.
Stoneflies. Mar. 31.
From Egg to Creel: The Life of a Hatchery Trout. Apr. 31.
Fish Nests. May. 31.
How to Make a Largemouth Bass. Jun. 31.
Topwater Lures. Jul. 31.
Species Profile: Channel Catfish. Aug. 15.

Straight Talk

(all by Executive Director Peter A. Colangelo)

Thinking Anew and Acting Anew. Jan. 2.
Pennsylvania Fishing and Boating Map. Feb. 2.
(Untitled—130-year Commission anniversary). Mar. 2.
Opening Day. Apr. 2.
Commonwealth Leaders' Direct Interest in Our Resources.
May. 2.
Keeping "Resource First" in the Federal Clean Water Act.
Jun. 2.
Bureau of Engineering and Development. Jul. 2.
Watch This Space! Aug. 2.

Sunfish, Sunfish Angling

Bantam Boxers: Bluegills and Redbreast Sunfish.
Vic Attardo. Aug. 16.

Trout, Trout Fishing

1996 Expanded Trout Fishing Opportunities.
Tom Greene. Mar. 13.
Advanced Bait Fishing for Trout. Mike Bleech. Mar. 16.
Buck Season Trout. Vic Attardo. Nov. 24.
Early Trout in the Shenango River Watershed.
Robert L. Petri. Mar. 23.
Eight Southcentral PA Trout Stream Hotspots.
Charles R. Meck. Nov. 4.
Fishing for Stocked Trout in Southeast Pennsylvania.
Mike Bleech. Apr. 17.
Hot Tactics for Big Brown Trout. Mike Bleech. Nov. 7.
Northeast PA's Best Trout Streams. Charles R. Meck.
Jul. 15.
PA's Best Fall Trout Angling. Sep. 20.
Southwest Pennsylvania Trout Streams.
Charles R. Meck. Jun. 23.
Telling on the Tully. Vic Attardo. Oct. 8.
The Moving Trout. Robert L. Petri. Apr. 10.
Working Together for Water. Mike Sajna. Jun. 14.
Ready, Set, Go! Charles R. Meck. Mar. 7.
Trout Fishing in Sinnemahoning State Park.
Mark A. Nale. Feb. 7.
Trout Fishing in Sullivan County. Robert L. Petri. Feb. 17.

Walleyes, Walleye Fishing

Catching Winter Walleyes. Mike Bleech. Jan. 4.
Ice-Out Pymatuning Walleyes. Darl Black. Mar. 4.

Water Pollution

Water Pollution. John A. Arway. Oct. 25.
White Perch, White Perch Fishing
White Perch: Our Next Gamefish? John. Swinton. Aug. 7.

On the Water

with Robert L. Petri

The Mystery Fish

If you spend enough time on the water, you eventually meet the mystery fish. While he could be anywhere, from the smallest spring run to the wide-open expanses of Lake Erie, Raystown or Kinzua, you most likely encounter him on bigger water. Perhaps you and he have already met.

What is the mystery fish? Well, that's just the point; the answer is a mystery. He is the unknown force that grabs your minnow as you spend the morning filling the bucket with crappies. He proceeds to peel all the line off your reel until with a final popping sound, he bids you farewell. He is the massive wake that comes out from beneath the undercut bank to intercept your spinner. Your rod bucks violently once, maybe twice, and he's gone. He is the snag that begins to move out of open water toward the weed bed and simply never stops. You reel in a limp line without a lure. Your knees have turned to jelly. He cannot be landed, and he is seldom, if ever, seen. After all, he's a mystery.

I usually meet the mystery fish at least once each season. He has a habit of showing up when you least expect him. I think somehow he knows when your guard is momentarily down; those snapshots in time when your mind wanders away from fishing to consider tomorrow's dental appointment or what's waiting on your desk at work. These are the times he chooses to attack. All the better to stay a mystery, you see.

The dying sunlight casts an amber glow over the waters of Presque Isle Bay. The endless breeze has finally called it a day and in the grassy flats around the weed beds, baitfish explode out of the water here and there with the bass in hot pursuit. If I stay on the tips of my toes, I can keep the water from trickling down inside my waders. Four broad Presque Isle bass with mouths like stovepipes have sucked down the big white popper in the last 20 minutes. It's the magic hour. I haul back for all I'm worth and drop the popper into a fishy looking dent in the weedline. The ripples die away and I jiggle the popper just enough to make it quiver. A "V" the width of a yardstick races across the water and slams into the popper. I raise the rod and connect for a second, and then all goes limp. I reel up to find half of my 14-pound tippet gone. The tag end looks like someone took a curling iron to it. Pike? Musky? Big bass? Who knows. Say hello (and goodbye) to the mystery fish.

My brother-in-law sits in the bow of the canoe as we shoot through a section of dancing fast water on the Clarion River near Belltown. The morning's fishing has been good, but not exceptional. Lunch hangs over the side of the canoe on a stringer—a 14-inch brown trout and a couple of decent rock bass. A dozen or so fair-sized smallmouths, red-eyed and indignant, have been caught and turned back to the river.

As the current slackens and we glide silently into the head of the next pool, my brother-in-law shoots the little crankbait




Three Springs Run at New Enterprise, northern Bedford County

on the end of his ultralight into an eddy where two submerged logs criss-cross in front of a massive boulder. Back in the stern, I'm not paying a lot of attention. I am occupied watching a flock of mergansers twist and turn as they circle the river, looking for a place to set down.

A sound halfway between a grunt and a whoop comes from the bow, and I look up. My brother-in-law's rod is bent nearly double, and he is hanging on as it bucks and jumps. "This is a fish," he remarks. It is a considerable understatement. The bow of the canoe swings toward the center of the river and we begin to be towed downstream.

"What is it?" I yell. "I don't know, but it's big," he answers, switching rod hands back and forth. For five minutes the canoe zig-zags down the Clarion, under the power of something so big we aren't at all sure we *want* to see it.

We need not have worried about what it was, and we had no reason to fear the sight of it. It was the mystery fish. And from the start, there had never been a chance we would land it. It just doesn't work that way. A few seconds later, a long "aaahhh" issues from the front of the canoe, the rod tip straightens and my brother-in-law reels in the slack line. We spend the rest of the day speculating..... The mystery fish is good for that.

I suppose that someday if I live right, pay my taxes, and keep fresh mono on the reel, I will finally land the mystery fish, and we will see once and for all just exactly what this force of nature is. But, you know, there is a part of me that hopes it never happens. The mystery fish is just one more of the reasons why I love this sport. He is on our minds when we force ourselves to roll out to the summons of a buzzing alarm clock at four a.m. without a murmur of complaint. He is the shadow lurking under the edge of the spatterdock in the cool mist of the dawn, and the reason why we just have to make that last cast to the dead tree in the center of the big pool. He is that sudden, electrifying break in the lethargy on the slow days on the water we all endure, and he lays at the heart of the anticipation that makes up so much of this thing we call fishing. He is always out there on the edge of the possible. Long may he remain a mystery. 



FISHING AND BOATING MEMORIES LAST

1997

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- Opening Date-Trout
- Opening Date-Muskies and Walleye
- Fish-for-Free Day
- Opening Date-Bass
- Fish-for-Free Day/National Hunting and Fishing Day

painting-Luther Hall; location-Loyalsock Creek



A LIFETIME

Boat Titling Regs Proposed *by Dan Tredinnick*



A set of regulations implementing a new state law on certificates of title for motorboats was proposed by the Pennsylvania Fish and Boat Commission during its fall quarterly meeting, held October 27-28 in Reading. The proposed regulations are drafted under the authority of Act 1996-73, which Governor Ridge signed into law in July. Under this law, Pennsylvania joins 34 other states that issue certificates of title for motorboats. In drafting the proposed regulations, the Commission reviewed regulations governing titles already offered for motor vehicles, snowmobiles and all-terrain vehicles, as well as model guidelines from states that currently issue boat titles. Once the regulations are adopted in final form, the Commission will begin issuing certificates of title in January 1998.

All outboard-powered motorboats 14 feet and more in length with a model year of 1997 and later must be titled. In addition, all inboard-powered boats regardless of length, including the class of small powerboats commonly referred to as personal watercraft (known by brand names such as JetSki, Wave Runner and SeaDoo) with a model year of 1997 or newer must be titled. Owners of boats for which certificates of title are required will not need to obtain titles until they sell or otherwise convey the boat.

The law is slightly different for watercraft coming from out of state. Boats that are currently titled in another state must obtain a Pennsylvania title when the Commonwealth becomes the state of primary use regardless of the boat's age, size or make. Boats not already titled by another state that have a model year before 1997 and those less than 14 feet are not obligated to be titled under the law.

The Commission projects that only 8,000 to 10,000 watercraft will be affected by the mandatory titling provisions in the first year of the law. However, the Commission expects considerable interest in the program as owners of boats that are not required to be titled may still voluntarily obtain certificates.

Titles provide several benefits to boat owners, including greater security and protection. Consumers are assured they have clear ownership of a vessel because a certificate of title is a legal document exhibiting ownership, but registration alone is not. Stolen or lost boats are easier to recover when the lawful owners can produce a certificate of title. And because some lenders won't finance a boat without a title, securing a loan to purchase a boat should become easier in Pennsylvania.

Once a certificate of title is issued for a boat, it must remain titled for all future transactions. Owners of boats for which titling is required may not register or operate their vessels in the state until a title is obtained.

The law establishes fees of \$15 for issuance of a title for unencumbered boats and \$20 for boats with encumbrances (\$15 for issuance of the title and \$5 for the recording of the lien.)

In other action at the Commission meeting, the Commission:

- Approved Big Bass regulations for two ponds and a small raceway immediately adjacent to Canoe Lake within Canoe Creek State Park, Blair County.

- Added a 2.1-mile section of Saucon Creek, Northampton County, to the Selective Harvest Program.

- Added five stream sections to the Delayed-Harvest, Artificial-Lures-Only Program: A 2.5-mile section of Mud Run, Carbon County; 1.1 miles of Pike Run, Washington County; 1.6 miles of Indian Creek, Westmoreland County; a 1-mile stretch of Bull Creek, Allegheny County; and 1.8 miles of Dutch Fork Creek in Washington County.

- Approved a grants program that would allow participants in the Cooperative Nursery Program to apply for grants earmarked for upgrades or improvements to nursery facilities.

- Moved to authorize the disposition of a 5.4-acre property near Tionesta Fish Culture Station, Forest County, and also to provide a site for a helicopter landing pad on Commission property for Soldiers and Sailors Hospital, Tioga County.

ANGLER

Dan Tredinnick is the Commission's Media Relations Chief.



photo-Mike Bleech

A LOOK BACK

at Pennsylvania Fishing Laws

by Mike Bleech

As recently as the times of our great-grandfathers, or great-great-grandfathers, conservation was barely beginning to be a concept in America. Yellowstone Park became the world's first national park only late in the 19th century. Except in the minds of a few enlightened individuals, natural resources were there for the taking, inexhaustible fuel for a growing country. Sport fishing was blossoming along some of our eastern trout streams, but in the rural areas west of Harrisburg fishing was generally done to put food on the table.

An immense number of fish called moss bunkers, has recently been caught at River Head, Long Island. 1,500,000, we don't know who counted them, were drawn on shore in a seine. 9,000,000 had been caught at River Head Bay and perhaps as many at Southold. They are used for manuring land.—Warren (PA) Gazette, July 18, 1826.

Pennsylvanians, like most people everywhere, shamelessly wasted natural resources, including fish. People neither cared nor understood how they were affecting the natural world. Today it is easy to criticize those people. But more accurately, it was an age of innocence coming to an end.

Whatever fishing method was most productive was the method used. Fish traps were often used to catch migrating fish like shad. Large barriers would be constructed to lead fish into entrapment areas where they were harvested. Heavy spears were popular. Crude angling, often a hook and line tied to a whippy tree branch, were a way to put food on the table. However, it was a desirable chore.



In the 1800s in Pennsylvania, sport fishing was blossoming along some of our eastern trout streams, but in the rural areas west of Harrisburg, fishing was generally done to put food on the table.

Fifteen hundred and forty shad were taken at a single haul at Chatham, Conn. on Monday week.—Warren Gazette, July 18, 1826.

An advertisement for shad was regularly seen in this western Pennsylvania newspaper at this same time.

In eastern Pennsylvania, the great shad runs up the Delaware River and Susquehanna River that had helped native Americans create a near-Utopian lifestyle before European invasion were exploited so recklessly by the Europeans, then Americans, that their impending demise, along with growing concern for declining water quality, prompted the creation in 1866 of what would become the Pennsylvania Fish and Boat Commission.

Governor Andrew G. Curtin appointed James J. Worall the first Commissioner of Fisheries for Pennsylvania. During the remainder of the 19th century, the Fish Commission grew to three members. Attempts to restore the shad runs were made; hatcheries were constructed, fish ladders were erected. Other species—carp, brown trout, smallmouth bass and crappies—were stocked at various waters in the Commonwealth.



But what we as anglers recognize as fishing laws changed little during the first 35 years of Fish Commission existence. There had been a few laws regulating fishing even before the Fish Commission, but they were generally regarded as nuisance laws, and enforced irregularly.

Smallmouth bass that had been stocked in the Susquehanna River and Delaware River drainages were protected in 1871. An act of 1874 authorized the appointment and payment of fish wardens. Fishing with explosives or poisons was prohibited in 1895.

“Us boys would walk over the hill to the Hickory Creek and catch a feed sack full of brook trout. They were never big, but there were always a lot of them.”—interview with Ray Bimber on events circa 1900.

Sport fishing conservation has been primarily a 20th century innovation in Pennsylvania. By this time the frontier had moved far westward out of Pennsylvania. This had been a rather rapid process. Even into the middle of the 19th century, the Allegheny Highlands had been frontier. But by the end of the 19th century, most of the old-growth forest had been stripped from the state, forever changing its complexion.

Some of the major effects of this timbering were that streams became warmer, more prone to siltation, more inclined to flood and to extremely low flows during summer.





Fishing had become more recreation than vocation. Certainly most people considered a good fish dinner to be part of the total fishing package. However, more people were beginning to realize that our aquatic resources have their exploitation limits.

Act No. 203 of the 1901 Session of the Pennsylvania Legislature was the real beginning of modern fishing laws.

No. 203 AN ACT

To declare the species of fish which are game fish, and for the species of fish which are commercially valuable for food, and to regulate the catching and encourage the propagation of the same; to define the public waters within the State; to protect the waters within the State from improper and wasteful fishing; to provide for the appointment of Fish Commissioners and fish wardens, and to declare their official powers and duties; to encourage and regulate the artificial propagation of game and food fish by said State Fish Commissioners; to regulate the distribution of the same in the waters of the Commonwealth; to provide penalties and punishments for the violation of the provisions of this act.

Commission staff electrofish in Penn's Creek. In 1928 the Commission established a Bureau of Research. In 1947, the Commission began a stream management program.

From the naming of the various game and food fish we can see that the 1901 understanding of our fisheries was crude. Designated as game fish were: "Salmon, brook trout, and all other fish belonging to the family of salmon and trout; black bass, green, or Oswego bass; crappie, grass, or strawberry bass, white bass, rock bass, blue pike, pike, perch; Susquehanna

salmon, or wall-eyed pike, pike, pickerel sun fish, and muscallonge."

Designated as food fish were: "...shad, white fish, herring, lake herring, cisco herring, alewife, sturgeon, striped bass, or rock fish."

Rod, hook and line, or a hand line with not more than three hooks were prescribed as the only means for catching game fish. Violation carried a \$25 fine.

A season for trout, except lake trout, was set for April 15 to July 31. Lake trout and "salmon trout" season was January 1 to September 1. The season for bass, walleyes, and most other game fish was June 15 to February 15. The fine was \$10 for each fish caught out of season. Our anadromous fishes were given a January 1 to June 20 season.

A much more innovative regulation concerned the minimum size of fish that could be kept. The following minimum sizes were set: white bass, rock bass and crappies, 5 inches; trout except lake trout, 6 inches; smallmouth bass, 7 inches; other game fish including muskellunge, 9 inches.

Can you imagine anyone today keeping a 9-inch musky? Remember, this was our first serious attempt at regulating angling.

Only brook trout were given the protection of a daily creel limit, though we would hardly recognize it as such. Anglers were limited to 50 per day. Fines



The early 1900s produced our first laws on sizes, seasons and creel limits.

A LOOK BACK

at Pennsylvania Fishing Laws

for exceeding this daily limit, or the minimum size limit, were \$10 per fish.

Set lines (unattended lines) were allowed in streams not inhabited by brook trout, from sunset to sunrise. The sale of brook trout, our state fish, was prohibited. No carnivorous fish could be planted in streams inhabited by brook trout.

Fishing with dynamite, nitroglycerine torpedoes, electricity, quicklime, and any other explosive or poisonous substance was prohibited.

Perhaps most importantly, fish commissioners, fish wardens, deputy wardens and other law enforcement officers were empowered to enforce the new fishing laws. The fish commissioners were given the authority to appoint special fish wardens at the request of counties. However, the counties were responsible for paying these special wardens.

A Department of Fisheries was established in 1903, consisting "of the Commissioner of Fisheries and four other citizens of the Commonwealth, who together shall constitute the Fisheries Commission."

The Commissioner of Fisheries was given an annual salary of \$3,000, payable quarterly. The other commissioners were not paid. The Commissioner was given an office in Harrisburg with a staff consisting of one clerk, who was paid \$1,200 per year, and one stenographer, who received \$600 per year.

Modern fishing management begins to take shape

The Fish Law would be rewritten several times in the 20th century, each time elaborating the duties of the Department of Fisheries, and making increasingly protective fishing laws. A few changes were particularly noteworthy.

Act No. 188 of the 1905 Session of the state legislature recognized the need to protect the Lake Erie fishery. Certain restrictions were placed on commercial and sport fishing. These laws would accomplish nothing. As we would learn during this century, regulating sport anglers is a lot easier than regulating commercial fishing, industries and municipalities that would

turn the big lake into a cesspool during the next five decades.

Pennsylvania fishing laws were rewritten in 1909 by Act. No. 207. This act elaborated on the duties of the Fisheries Commission and enforcement officers. Dam builders were required to construct fish passage devices. Fishing on Sunday was prohibited. Fishing seasons, minimum size limits and daily creel limits were tightened a bit.

Tip-ups are mentioned for, perhaps, the first time in our laws. Catch-and-release fishing was established.

...That no penalty shall be imposed if any fish, caught in violation of any part of this act, is returned at once to the water from which it was taken, in the condition in which it was captured.

Act No. 207-1909 provided for what today would seem to be an unlikely situation. Upon the petition by 200 residents of any county, a body of water that had been depleted of fish, then stocked, could be closed to fishing for a period of time.

The next major change in our fishing laws occurred with Act No. 257 of the 1921 session. This act required citizens of the Commonwealth over 21 years of age to purchase fishing licenses to fish in Commonwealth waters. The cost was one dollar plus the fee of the county treasurer. Funds went primarily to the operation of the Department of Fisheries.

Act No. 259 of the 1929 session provided for daily harvest limits for panfish

creel limits was eliminated by Act. No. 219 of the 1957 Session. The Fish Commission was granted the authority to make such changes. Note that there was still a daily creel limit of 25 crappies and rock bass at this time.

The last major change in the fishing laws before the current set was Act. No. 673-1959, the Fish Law of 1959. This may have been the first Act in which the term "Pennsylvania Fish Commission" was used. Even as recently as this, some of the basic laws regulating angling were quite different.

By this time the mid-April trout season opening day had become a tradition, a holiday in many areas of the state. The minimum size limit was 6 inches, the daily creel limit, 10. Lake trout were still also referred to as "salmon trout."

The season for all other game fish was consolidated to June 14 through the last day of November. Walleyes, still also called "Susquehanna salmon" and "pike perch," had a minimum size limit of 12 inches. The minimum size limit for both pike and muskellunge was 24 inches, and the daily creel limit for each was two.

Panfish and some rough fish still had daily creel limits, 15 each for yellow perch, sunfish, catfish, suckers, carp and fallfish.

Our fishing laws have undergone a gradual evolution during the 20th century. When the first Commissioner of Fisheries was appointed in 1866, it was apparent to our earliest fisheries conservationists, primarily anglers, that the pristine fisheries the European colonists found in Pennsylvania were rapidly declining. Regardless of the efforts of the growing Fish Commission, this decline continued through most of the 20th century. But without the Fish Commission, through the support of anglers, we can assume that far more would have been lost forever.

As it was originally intended to be, the Fish Commission, now the Pennsylvania Fish and Boat Commission, has served to provide clean aquatic habitat, benefitting many more than licensed anglers through a set of fishing laws that have grown with our increasing knowledge about managing our aquatic resources.

Today, the mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.



circa 1920

and some rough fish. A daily limit of 25 each was set for yellow perch, sunfish, catfish, suckers, chubs and fallfish.

The Sunday fishing law was modified with Act No. 364 of the 1939 Session. Then it became legal to fish on Sunday at public waters, or at private waters with the consent of the landowner.

The task of going through the State Legislature to change such minor fishing laws as seasons, minimum sizes and daily

What a Way to Celebrate New Year's Eve!

by Charles R. Meck

It happened to Bryan Meck of York in late December 1992. The same thing happened to Bob Budd of Altoona on the last day of that month in 1993. Ken Rictor of Chambersburg did it in late December in 1995. You won't see many doing it that time of year, but what the heck, why not try it—fly fishing for trout on New Year's Eve.

Bryan Meck, Bob Budd, Ken Rictor and a small but growing number of other anglers celebrate by fly fishing on the last day of the year. Are they crazy? Who would think of fly fishing on the last day in December in Pennsylvania? If the weather cooperates, try it this year!

I first tried fly fishing near the end of December in 1990. On several occasions since then I've had to park my car a half-mile or so away from the stream because snow piles prevented my parking closer. But on occasion, I've caught trout—and enjoyed it.

I told Bob Budd about an experience I had with late-December fly fishing and he agreed to try it—the day we selected just happened to fall on the last day of December. I had fished on the lower Bald Eagle Creek near Milesburg for the past couple of weeks and had caught quite a few holdover trout. Now Bob wanted to experience some late-season action. As we approached the 50-foot-wide stream we commented about the lack of snow—so far that year. Little did we realize what January, February and March of 1994 had in store for us. Central Pennsylvania got dumped on—more than 100 inches of snow fell that winter. Snow piled so high those three months that fly fishing on

most streams in the Commonwealth was out of the question. But in late December just a trace of snow covered the ground.

The name of the stream we planned to fish that day, Bald Eagle, is really a misnomer. Spring Creek joins the Bald Eagle

at Milesburg and forms what I call the lower Bald Eagle. Because the volume of water picked up from Spring Creek often surpasses that from the Bald Eagle, this lower section is actually a large limestone stream. Hence, in the winter, water temperatures range a few degrees higher than most freestone



Beadhead Pheasant Tail Nymph

streams—a distinct advantage when you're planning to fly fish a stream in late December.

When we arrived at the section we planned to fly fish, I immediately checked the water temperature. In this same pool just a few months before, Don Bastian and I had landed and released three heavy holdover brown trout. Here, now more than six months ago I saw Chuck Moxley of Cortland, Ohio, land more than a dozen trout during a sulphur hatch. But now the stream and its trout presented more of a challenge. On this last day in December the temperature also presented a problem. I checked and rechecked the water temperature and recorded a 43-degree reading. Add to our woes a brutal air temperature of 22 degrees and you can see the difficulties we encountered. On every fifth cast or so our guides froze and we had to take a minute or two out to free them.

Get out there and enjoy those last few days of the year. It's a new, much safer way to celebrate the incoming year and still be with family and friends.

What a Way to Celebrate NEW YEAR'S EVE!

Bob Budd began just upstream from me in a heavy riffle that led into a long, deep pool. He had tied on a black-bodied Woolly Bugger with plenty of lead added to the body so he could fish it deep. On a previous trip to this same stream, this one in late September, Bob had coaxed a heavy streambred brown into hitting the bugger pattern. Bob never landed that trout but estimated it to be over 20 inches long.

On this cold, blustery New Year's Eve day Bob didn't have to wait long to get a strike. Within minutes a heavy fish hit the bugger. Bob brought the 15-inch trout in and we looked in amazement at the rainbow that he released. In the three cold hours we fly fished that afternoon we had three or four more trout on the line—but never landed another one. Nevertheless, we enjoyed the trip and agreed that we'd do it again.

Ken Rictor of Chambersburg and his dad Bill Rictor of Salisbury, Maryland, fly fished on New Year's eve in 1995 on Falling Spring Branch just a mile or two from his house. Ken used a tandem made up of a Patriot dry fly and a Cress Bug. In a half-hour of fishing on New Year's Eve Ken caught and released three heavy Falling Spring rainbows. All the trout at that time of the year took the Cress Bug pattern—not bad for fly fishing on the last day of the year. Bruce Matolyak of Lemont has commented many times that he thinks using the Cress Bug on the tandem is an excellent way to pick up trout—anytime of the year.

Ken Rictor had one common complaint about fly fishing at that time of year in Pennsylvania. "I had to clean the guides out

every couple of casts. The extremely cold weather clogged them."

So fly fishing in late December really works—in fact, it can be an

extremely worthwhile change of pace from the harsh winter. To take full advantage of fly fishing at this time of year you have to remember some important points about proper gear; appropriate patterns, hatches, if any, that you'll see; some special cold-water tactics; and which streams in the state offer the most fly fishing opportunities in winter.

Gear

Dress warmly for those late-December trips. Depending on the weather it's always a good rule to use 5mm neoprene waders and gloves. I also take one of those new microwaveable scarves with me. They last for several hours and really keep you warm.

Flies

Don't go on any of those early winter trips without an ample supply of Woolly Buggers. I prefer the type my son, Bryan Meck, ties—one with a tail of mixed black marabou and flashabou, and a body of black or dark-olive chenille palmered with a black saddle hackle. Bryan adds about 20 to 30 wraps of .015 lead to the body to sink the pattern deeply. This pattern works in high water, in the winter, and throughout much of the year.

A second pattern I always carry with me, even on those winter fishing trips, is the Green Weenie. It's nothing more than a piece of fine chartreuse chenille wound on a size 12 Mustad 9672 hook. As with all wet fly patterns that I use during the winter, I add weight to the body.



*Green Weenie:
Fine chartreuse
chenille on a
size 12 hook.*



Bobs Creek, northwest Bedford County near Reynoldsdale



*Spring Creek,
Centre County*

Don't forget to take beadhead patterns with you. Take some size 12 Beadhead Pheasant Tail Nymphs and some Beadhead Olive and Green Caddis patterns. All of these patterns work the entire year, including wintertime. Tie plenty of size 10 and 12 olive, chartreuse and green-bodied beadheads. These seem to work especially well in winter.

New Year's Eve tactics

Most likely you'll encounter cold water temperatures when you fish in late December. Often you'll record water temperatures that range from 35 to 45 degrees. Trout often stay at the bottom of the deepest pools at this time of year, so it's important to reach these fish. I remember one late-fall afternoon with water temperatures in the mid-40s when I used a tandem made up of a Patriot dry fly and a Beadhead Pheasant Tail Nymph. I set the distance between the dry and wet flies at four feet. I fished for more than two hours with this setup and managed to catch only one trout. I then increased the distance between the two patterns to six feet. That distance made casting a bit difficult but it did get the pattern deeper. The result of the deeper wet fly was that five trout took that deeper pattern in the same run that I had just fished a few minutes before. That experience showed me the importance of getting the pattern where the trout are—especially when you encounter cold water.

I said before that you should look for trout in late December at the riffles and runs that lead into deep, slow pools. Fish these areas with one of the patterns I suggested and fish it slow and deep. Concentrate on these areas and you'll get strikes. Remember that trout usually strike the pattern with much less enthusiasm at this time of the year than they do when the water temperature rises.

Concentrate your activities to streams that harbor holdover or streambred trout. I remember fishing the Bald Eagle Creek near Julian one day in late December and fishing at one productive pool and never had a strike. Why? This stream warms into the 80s in late summer and either the trout die or they migrate. I then headed downstream to the lower Bald Eagle a few miles below. Here water temperatures stay in the 60s and low 70s throughout the summer. In two hours on that stream I caught four holdover trout. Remember, some of our freestone streams lose much of their trout population when they warm considerably in the summer.

Don't overlook some of our more productive smaller streams for your early winter trip. Craig Josephson and I have fly fished Bob's Creek in southwestern Pennsylvania on several cold December days and on each one of them we caught trout. On one of those December fishing trips Craig released a half-dozen trout. One of them, a brown trout, measured over 15

inches long. Even though temperatures on Bob's Creek rarely went above 45, that December we caught trout on each visit to the stream.

Where to fish

Did you know that many Pennsylvania trout streams hold good winter midge hatches almost every day? If you fish on Fisherman's Paradise on Spring Creek or dozens of other limestone streams throughout the state, you can fish over rising trout even in December and January. I've seen dozens of Pennsylvania trout streams, especially limestone streams, that host hatches in midwinter. Limestone streams like the LeTort and Falling Spring in the southcentral part of the state hold midge hatches throughout the winter. Don't overlook streams like Logan Branch in central Pennsylvania, the Little Juniata River, and of course, Spring Creek. Don't forget Big Fishing Creek near Lock Haven. This limestone gets an inordinate amount of fishing pressure—but not this time of the year.

You say you don't live close to a limestone streams? Then try one of the more than a dozen tailwaters located throughout the Keystone state. You'll find warmer water temperatures and good winter trout fishing on tailwaters like the Youghiogheny River between Confluence and Ohiopyle, on the Codorus near Hanover; on the East Branch of the Clarion River; and on the Pohopoco Creek near Lehighton.

Hatches

Don't expect much in late December—at most you'll see a couple of stoneflies, some little blue-winged olives and some midges. On most Pennsylvania limestone streams you'll encounter midge hatches almost every day of the year, including the last day. Take plenty of Griffiths Gnats in sizes 20 to 24 and tie up some Dark Gray Midges in sizes 20 to 24. Use a stripped peacock quill for the body of these flies and finish them with a grizzly hackle.

Often in winter you'll see pods of five and 10 trout feeding on chironomids when the hatch is heavy. Look for these feeding trout in slower sections of the stream or river where they don't have to expend much energy for the food they take. Hatches, if they occur, appear from about noon until 4 p.m.

I've witnessed some little blue-winged olives on some of our more southern limestone streams in late December, like Falling Spring. But don't expect any explosive mayfly hatch this time of the year. They just don't happen.

Get out there and enjoy those last few days of the year. It's a new, much safer way to celebrate the incoming year and still be with friends. Maybe, just maybe, you'll say, "What a way to celebrate New Year's Eve!"

ANGLER

THE GUARDIANS

by WCO R. Vance Dunbar



MY WORK DAY will begin in a few minutes, but for now I sit. I sit along the banks of Spring Creek at Fisherman's Paradise in Centre County and I watch. I watch the wild brown and brook trout rise to the hatch of cahills under the veil of a late-spring fog. I take in the canyons that rise sharply to the north and west. I view myself, my image reflected in the dew on my polished boots. I see tan and green and a badge—the badge of a conservation officer. I stand and face south and walk toward the H.R. Stackhouse School. As I approach its double doors I remember the events of the past year and the training that brought me to where I am now—two days from graduation.

The testing process began with some 1,200 applicants. By August of 1995 there would be 18 of us and we would all graduate. Our ages ranged from 47 to 25 and our backgrounds included a former U.S. Army Special Forces soldier, a pre-school teacher, a coffin builder, an air traffic controller, several corrections officers, a couple of ex-cops, teachers and park rangers. The only common denominator appeared to be a love for and commitment to nature. Our training consisted of two phases, Act 120 and conservation officer school, which lasted 10 months.

The setting for the police academy (Act 120) was a rural town named Herman in the county of Butler. The building was an 1800s-era seminary named Ciotti Manor, and our living quarters were old monastic cells. At Ciotti we had a resident training

coordinator named Dale Paglia. Dale is reminiscent of a troll in the story of the three billy goats' gruff. He stands about five foot-eight and is a bit hefty. He dresses in shorts and an old t-shirt and is probably one of the greatest men I have ever had the pleasure of encountering.

Dale is a seasoned officer who specializes in committing mental health cases. He was our mentor and is one of those rare men whose stories could make a rock smile. Question: How do you take 18 total strangers and make a team out of them? Answer: Lock them up in close quarters for four months and make them miserable.

One particularly effective method of making us miserable was our daily dose of sweat and pain. Physical training (PT) lasted 2 1/2 hours on Tuesday and Thursday and one hour on Monday, Wednesday and Friday. I believe that the amount of support we gave each other during PT was the glue that bound us. A central part of our daily sessions consisted of formation runs while sounding off to cadence. I remember our favorite cadence :

Up jumped a monkey from the coconut grove,

He was a mean mammer-jammer you could tell by his clothes,

He wore tan and green with a Stetson hat,

He was a WCO. He was all of that.

He lined a hundred poachers up against the wall,

He bet twenty bucks he could cite them all,

Well he did 98 'till his face turned blue then he backed off, *slacked off and did the other two.*

Our schedules were hectic. After our 6 am PT we had a quick shower, ate and rushed for the classroom. Then we sat. We sat for eight hours and listened to lectures on law. Our instructors were some of the best in the state. They were chiefs of police, state troopers and agents of the Attorney General's Office, but we were tired and looked for distractions.

Maybe it was due to our fatigue or maybe the heat of the classroom or perhaps just the hour of the day. Maybe all these factors were responsible for the trouble hours. The trouble hours fell between 2 pm and 5 pm and claimed many casualties. We were seated two at a table with two parallel rows of four tables and one table at the rear of the classroom directly between the rows. On the right seat of the last table sat Clyde Warner and to his left sat Erick Shellgren, and they were the generals of the right and left armies, respectively. During the trouble hours designated lookouts would spy on the opposing army, and whenever a chin would drop to a chest for more than a three-second count, a casualty was recorded. Three incidents in one day was considered a fatality.

Perhaps the armies were also employing laughing gas because giddiness was a recurring problem. For example, we had one instructor who insisted on pronouncing misdemeanor as "Mr. Meanor," and although it may not appear funny now it was hilarious then. The trouble hours also pro-

duced such nicknames as "Patches," "Bucky," "Yetti," "Uncle Fester" and the "Prozac Kid."

In retrospect I believe our antics were a great stress reliever and did not hinder our performance. Our class grade point average was 95 percent, and qualified as the highest ever in Pennsylvania. In November we received our comeupins and transferred to the conservation officer school.

The setting is a place called Fishermans Paradise in the town of Bellefonte just north of State College. We are located at the base of a canyon rim and a wild trout stream named Spring Creek separates us from one of the Commission's largest trout hatcheries.



The building is made of brown stone and wood and has a large, open front porch. Inside the main building is the classroom and the dining hall. There is a monstrous mounted brown trout in the lobby and a fireplace at the western end of the room. The eastern end of the complex contains four wooden cottages divided in half with each living quarter designated by the name of a particular species of fish. I lived in the Muskellunge Room and shared it with two roommates (Rob Croll and Terry Diebler). On day one our training coordinator, Jeff Bridi, informed us that we could fly fish on our lunch breaks if we were so inclined—Life was good!

Life at Stackhouse was more communal than dictatorial: We took weekly turns at leadership positions, we had flag ceremonies, and every evening we completed chores around the complex and typed our daily notes. Upon graduation I had filled eight 2 1/2-inch binders with typed notes and handouts—the contents of which I will use as a reference library for years to come. The highlights for me were water rescue, public speaking and field training.

Water rescue was divided into two segments—ice and moving water. Ice rescue training occurred in February at a pond that had holes cut into it. After a few hours of classroom preparation we were issued wet suits and instructed to jump into the water. My wet suit had a hole in it. The instructors took pictures of us and coached us through self-rescue and buddy-assisted rescue.

During moving-water training the Army

Corps of Engineers almost doubled the discharge into the outflow of Foster Joseph Sayers Dam. We put on life preservers and plunged, one at a time, into the fast-moving 40-degree water while our classmates attempted to rescue us with throw ropes. This time we had no wet suits and were informed that we would all experience hy-

pothemia first hand because it helps us better relate to those we are trying to rescue.

Communications skills and public education were condensed into a marathon week of nightly cram sessions culminating in each of us assigned to an elementary school for one day. During our day we averaged three to four half-hour presentations to various grades of students.

Perhaps the former teachers encountered less difficulty than I did, but they wouldn't admit to it. How difficult can it be to teach elementary school students? Boy, was I naive. It was my last presentation of the day when I entered the second grade room of a small school in Happy Valley. Under one arm I held a mounted musky and under the other I had various pieces of a snapping turtle. Out of nowhere came a child I refer to as "little Johnny, the poacher's boy." Little Johnny ran straight at me and immediately thrust his hands into the mouth and onto the teeth of the musky while asking if the teeth were real. Johnny quickly answered his own question.

As I was setting up it appeared as if the other children were staging a war party and all the while Johnny continued with his banter, "Are you a game guy? My daddy kills deer. My daddy kills deer all the time. We always eat deer." I finally managed to capture the class's attention by moving them from their chairs to the floor. I had them sit cross-legged in a semicircle around me and totally gave up my prepared lecture. I allowed them to pick the topic and I would expound on it.

We were on the topic of amphibians when

I noticed a little girl that I refer to as "Suzy Salamander." Her hand was straining skyward and as she squirmed impatiently before me she made funny noises with her mouth. She stopped me dead in my tracks when she blurted, "My brother and me found salamanders under a board under the trailer once and we, we, we.... took

'em to Suzy's house cause Suzy has an, an, an.... Easy Bake Oven." Such were my experiences with education.

We were afforded seven weeks of field training of which roughly half would be fish law enforcement and the other would be boat law enforcement. As rookie officers we collectively could write a book on our experiences. For in-

stance, on my first day in Lancaster County my field training officer, WCO Derek Pritts, and I were serving a search warrant on a trailer in a rural location. Derek and I entered a cramped room and he proceeded to open the door of the room's only closet while I observed.

Some people believe that life occurs in spots of time that are vivid memories captured in slow motion to be played over again between spots. This was one of those times. From the top of the closet came the head of a snake bigger around than my fist, and it was suspended inches away from Derek's face. He took several steps back, bumped into a terrarium and ordered, "Vance, search that closet." Our eyes locked for a moment before training in on the terrarium he so rudely disturbed and the northern copperhead staring at us from inside it.

I snap back to the present as the schoolhouse doors close behind me. I turn left into the classroom and pass under a sign that reads, "Through these portals pass the men among fishermen." I take my seat and again I think. I think about how fortunate I am to be a member of the "thin green line," soon to be entrusted guardianship of the waterways and all things wild that reside therein.

The thirteenth class of waterways conservation officers extends its sincere gratitude to all those who made our training possible and pledge to respect you, the anglers and boaters of the Commonwealth, to which we have so recently been sworn to serve.

ANGLER



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WHILE SUPPLIES LAST!

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The Commission has available a limited number of its new commemorative shad knife. Only 750 of these limited-edition, individually numbered knives will be produced. The cost, including shipping and handling, is \$57.50. Pennsylvania residents add 6 percent sales tax for a total of \$60.95 for each knife. The knife is manufactured by W.R. Case & Sons Cutlery Co. Knives will be ready for shipment early in December. Make checks or money orders payable to *W.R. Case & Sons Cutlery*, and mail orders to PA Fish and Boat Commission, att: Eleanor Mutch, P.O. Box 67000, Harrisburg, PA 17106-7000. If no knives are available, we will return your check. Your knife will be mailed to you by W.R. Case & Sons Cutlery.

Order now to ensure timely holiday delivery!



The mission of the Pennsylvania Fish & Boat Commission is to provide fishing and boating opportunities through the protection and management of aquatic resources.

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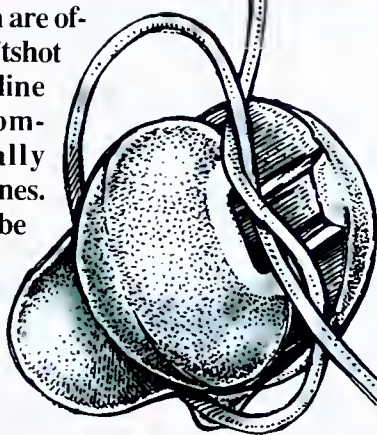
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Angler's Notebook by Seth Cassell

Trout fishermen are often plagued by splitshot sliding down the line or coming off completely, especially when using light lines. This nuisance can be stopped by tying an overhand knot around the shot before crimping it shut.



If your rod is not casting well, here are a few things to check. Make sure the pound-test line you are using is in the range of what the rod can handle. Most manufacturers print this on the side of the rod, near the butt. Also printed should be a range of lure weights that best matches the rod's capability. If your lure is too light or heavy, it may not cast satisfactorily. In addition, check to make sure the line you are using matches the size of your reel. This is usually printed on the reel itself. Check to make sure your line is not too old or has too much memory in it. This can impede casting performance.

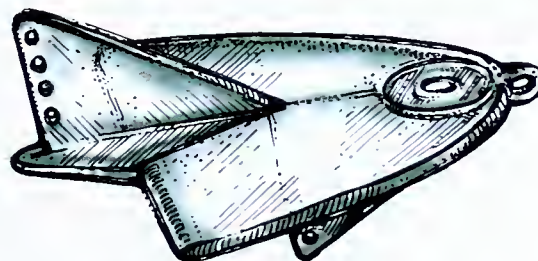
Trolling motors are a convenience when fishing, especially when on lakes. But they can become a hassle when fishing water with an abundance of aquatic vegetation. To get better performance from your trolling motor in this type of environment, stop frequently to clean the weeds off the prop's main shaft and the propeller. Also, try filing an edge on the prop blades. This can help your electric motor chop through weeds.

When fish, especially sunfish, crappies, and perch, strike while ice-fishing, watch your other set-ups, especially if they are nearby. Sometimes one fish striking will entice others to do the same.

Styrofoam buckets are the best bait buckets for wintertime fishing. They are inexpensive, and unlike metal and plastic minnow buckets, they insulate the water and keep it warm so your bait will be livelier and last longer. The only disadvantage of Styrofoam buckets, of course, is their lack of durability.

Across the Commonwealth there are several warm-water discharges from power plants that empty into rivers. The area near the water discharge offers excellent winter fishing for many species. The fish are attracted to the baitfish that forage in the water, as well as the more comfortable water temperature.

Applying head cement to flies is often a wasted step in the fly-tying process. Whip finishing the head will suffice in holding the fly intact. Most flies, especially dry flies and other delicate creations, often fall apart after hard use long before the whip finish gives way.



There are several crankbaits and lures on the market that are designed for fishing and trolling in deep water. When extreme depths are necessary, however, try tying on a diving plane, which attaches to the line above the lure. This device does a good job getting your offering to the fish. When using a diving plane, exert a little more force when setting the hook.

illustration: Ted Walke

Anglers Currents

Winter Trout Stocking

Beginning in November and continuing through December, more than 96,000 adult trout are being released across the state as part of the Pennsylvania Fish and Boat Commission's Winter Stocking Program. These plantings of legal-sized trout provide anglers with expanded fishing opportunities during late autumn and into the winter.

The program encompasses 59 lakes in 45 counties. In all, 96,100 trout will be stocked. A total of 68,910 rainbow trout make up the bulk of the stocked fish, with 21,870 brook trout and 5,320 brown trout rounding out the program.

All rules for the Extended Trout Season are in effect. All trout harvested must be a minimum of seven inches in length and no more than three trout per day may be kept.

1996 Winter Trout Stocking

County	Waterway	County	Waterway
Allegheny	North Park Lake	Lackawanna	Merli-Sarnoski Lake
Beaver	Raccoon Lake	Lancaster	Muddy Run Recreation Lake
Berks	Antietam Lake	Lawrence	Cascade Quarry
Berks	Scotts Run Lake	Lebanon	Stovers Dam
Blair	Canoe Lake	Luzerne	Sylvan Lake
Bucks	Lake Luxembourg	Lycoming	Little Pine Lake
Bucks	Levittown Lake	McKean	Bradford Reservoir #3
Cambria	Duman Dam	Monroe	Tobyhanna Lake
Cambria	Lake Rowena	Northampton	Minsi Lake
Cameron	George B. Stevenson Reservoir	Perry	Allen Holman Lake
Centre	Poe Lake	Pike	Fairview Lake
Clearfield	Janesfield Dam	Potter	Lyman Lake
Clearfield	Parker Lake	Schuylkill	Locust Lake
Clinton	Kettle Creek Lake	Somerset	Laurel Hill Lake
Columbia	Briar Creek Lake	Susquehanna	Quaker Lake
Cumberland	Laurel Lake	Tioga	Beechwood Lake
Cumberland	Opossum Creek Lake	Tioga	Lake Hamilton
Elk	Laurel Run Reservoir	Union	Halfway Lake
Elk	Ridgway Reservoir	Venango	Justus Lake
Erie	Lake Pleasant	Warren	Chapman Lake
Fayette	Dunlap Creek Lake	Washington	Canonsburg Lake
Fayette	Virgin Run Dam	Washington	Dutch Fork Lake
Forest	Wards Ranch Pond	Wayne	Upper Woods Pond
Franklin	Letterkenny Reservoir	Westmoreland	Donegal Lake
Fulton	Cowans Gap Lake	Westmoreland	Keystone Lake
Greene	Duke Lake	Westmoreland	Twin Lake - Lower
Huntingdon	Stone Valley Lake	Westmoreland	Twin Lake - Upper
Huntingdon	Whipple Lake	Wyoming	Winola
Jefferson	Cloe Lake	York	Hanover Water Company Dam

New state parks reservation system

The Pennsylvania Department of Conservation and Natural Resources (DCNR), Bureau of State Parks, is developing a new centralized reservation system for making reservations for cabins, campsites, group tent camping and pavilions. DCNR expects to have this service available by mid-1997.

With this new system, the Bureau of State Parks will be able to provide a one-stop shopping service on a toll-free telephone line for all individuals who wish to make a reservation. This new reservation system will replace the current manual reservation system and eliminate past problems by operating from a central toll-free telephone number. The new system will also allow state park patrons to pay for their sites with major credit cards, allowing reservations to be made up to two days in advance of the check-in date.

Individuals can contact DCNR and get current information on the World Wide Web at <http://www.dcnr.state.pa.us>, or call 1-800-63-PARKS.

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Cast and Caught



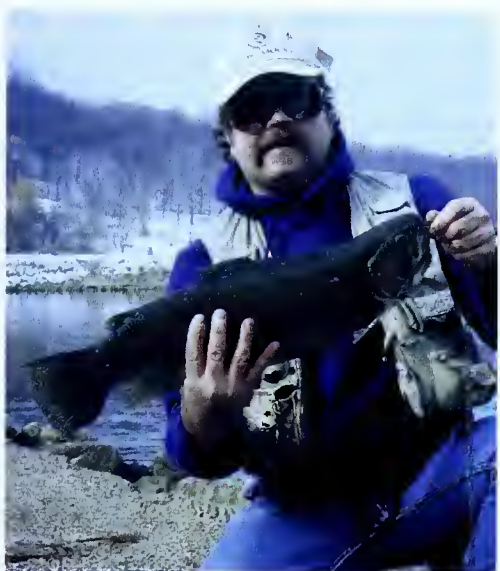
Pete Bova, Warren, hooked this walleye while fishing below Kinzua Dam on the Allegheny River. The fish measured 32 1/2 inches long and weighed 12 pounds, 15 ounces.



Bradford resident William Hokensen used a shiner to catch this brown trout. The fish, caught in Tunungwant Creek, was 23 inches long and weighed 6 pounds, 9 ounces.



Father and son team Lenny and Anthony Whatmore caught and released these two largemouth bass while fishing on an Indiana County lake. Anthony's fish (right) was 20 inches long, and Lenny's fish was 15 1/2 inches.



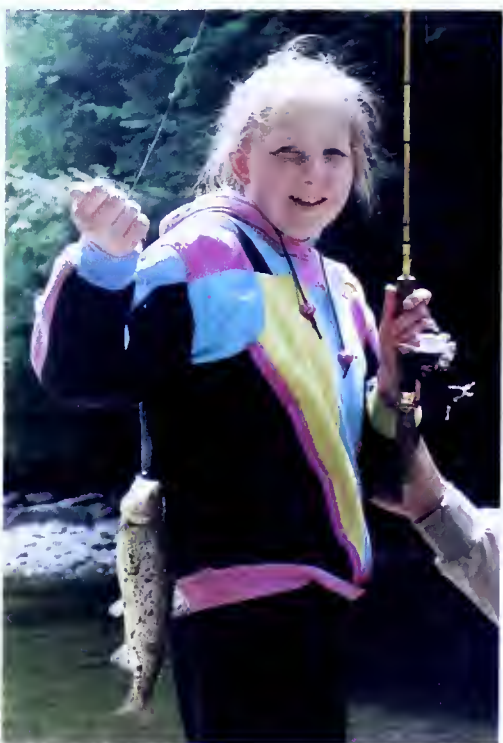
Tom Brown, Bridgeville, caught this 22-inch, 5-pound, 9-ounce brown trout in the Youghiogheny River Tailrace last November.



Ken Gobel, Port Jervis, NY, caught this striped bass while fishing on the Delaware River. The 36-pound fish was 44 inches long and had a 25-inch girth.



Paul Middleton, Wilkes-Barre, fooled this rainbow trout with a shiner. The Harvey's Lake fish measured 25 inches long and weighed 10 pounds.



Kelly Tipton shows off the rainbow trout she caught in Roaring Brook, Tioga County, during a family camping trip. Good catch, Kelly!

Next month, the premiere issue of

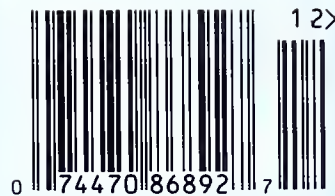
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